

Changes in Marital Satisfaction Across the Transition to Parenthood: The Role of Adult Attachment Orientations

Personality and Social
Psychology Bulletin
38(11) 1506–1522
© 2012 by the Society for Personality
and Social Psychology, Inc
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/0146167212454548
http://psp.sagepub.com


Jamie L. Kohn¹, W. Steven Rholes², Jeffrey A. Simpson³, A. McLeish Martin, III²,
SiSi Tran⁴, and Carol L. Wilson⁵

Abstract

This longitudinal study investigated marital satisfaction trajectories across the first 2 years of parenthood. Data were collected from new parents (couples) 6 weeks before the birth of their first child, and then at 6, 12, 18, and 24 months postpartum. Growth curve models revealed two key findings. First, for highly anxious individuals, satisfaction was lower or declined when they perceived their partners as less supportive and as behaving more negatively toward them. Second, for highly avoidant individuals, satisfaction was lower or declined when they perceived more work–family conflict and greater demands from their families. The findings suggest that attachment insecurities predict dissatisfaction in new parents primarily when stressors block the pursuit of important attachment goals.

Keywords

adult attachment, marriage, romantic relationships, social support, family

Received March 12, 2011; revision accepted May 19, 2012

When couples become parents, they experience dramatic changes in their lives. The transition to parenthood is often stressful and can have harmful effects on individuals and their relationships. In addition to facing the challenges of fatigue, monetary strain, and work–family conflict, couples must also learn to be parents and coparents. Given these and other stressors, many new parents experience declines in relationship satisfaction during this period (Mitnick, Heyman, & Slep, 2009). Moreover, new parents commonly experience steeper declines in marital quality than childless couples do (Doss, Rhoades, Stanley, & Markman, 2009; Feeney, Hohaus, Noller, & Alexander, 2001; Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008; Shapiro, Gottman, & Carrère, 2000). As many as one third of couples reach clinical levels of marital distress during the first 18 months of the transition (Cowan & Cowan, 2000). Despite this, some couples actually become more satisfied during the transition (Doss et al., 2009).

Several studies have explored patterns and predictors of change in relationship satisfaction, examining time frames ranging from 6 months to 5 years postpartum. Studies of the first 6 to 12 months have consistently documented large declines in relationship satisfaction (e.g., Grote & Clark, 2001; Rholes, Simpson, Campbell, & Grich, 2001). However, the story is more complex in studies with longer time frames. One study found that satisfaction declines

steeply for couples during the first year of parenthood, but begins to rebound during the second year (Cox, Paley, Burchinal, & Payne, 1999). Doss et al. (2009) reported steep declines in relationship quality immediately following birth, with satisfaction continuing to decline over the next 4 years. In contrast, Shapiro et al. (2000) found that when wives become less satisfied across the first 6 years of marriage, the decline begins 1 year after the birth of their first child, not immediately after birth. Given these mixed results, further research needs to clarify the timing and magnitude of changes in relationship satisfaction.

Declines in relationship satisfaction can have negative effects on partners, the child, and the family system. Partners who are less satisfied tend to suffer from more depressive

¹University of Texas Health Science Center at San Antonio, USA

²Texas A&M University, College Station, USA

³University of Minnesota, Twin Cities Campus, Minneapolis, USA

⁴University of Toronto at Scarborough, Ontario, Canada

⁵Pennsylvania State University, Erie, USA

Corresponding Author:

Jamie L. Kohn, Division of Hospital Medicine, Department of Medicine,
University of Texas Health Science Center at San Antonio, 7703 Floyd Curl
Drive, MC7982, San Antonio, TX 78229-3900, USA
Email: kohn.jamie@gmail.com

symptoms (Beach, Katz, Kim, & Brody, 2003) and higher rates of other psychiatric disorders (Whisman, 2007). Marital conflict also adversely affects parent–infant attachment, child development, and family interaction patterns (Owen & Cox, 1997; Paley et al., 2005). These negative outcomes underscore the importance of identifying why marital satisfaction plummets for certain couples. The current study addresses these issues by examining the longitudinal effects of romantic attachment orientations on marital satisfaction, exploring factors that interact with attachment orientations to reduce or exacerbate typical declines in relationship satisfaction. Although the transition to parenthood has been studied in the context of attachment theory before (e.g., Rholes et al., 2001; Rholes et al., 2011), an attachment theory approach remains relatively new. Thus, one contribution of this article is the further exploration of how attachment processes impact the transition to parenthood.

Attachment Theory

According to attachment theory, individuals develop internal working models of close relationships based on interactions with primary caregivers and others who have served as attachment figures (Bowlby, 1982). Attachment insecurities typically originate from relationships with unsupportive attachment figures. Over time, individuals who have unsupportive attachment figures develop avoidant or anxious attachment patterns, which form the basis for adult attachment orientations (styles).

According to Shaver and Mikulincer (2002), adults who have anxious attachment orientations use hyperactivating strategies to cope with their attachment insecurities, whereas those who have avoidant orientations use deactivating strategies. Highly anxious individuals yearn to increase proximity to their attachment figures. Perceived failures at proximity-seeking result in heightened vigilance to attachment threats. Increased vigilance, in turn, exacerbates perceptions of threat and fuels feelings of insecurity, producing an intensification of proximity-seeking strategies. This negative feedback loop produces chronic activation of the attachment systems of highly anxious people.

Highly avoidant individuals, by comparison, do not seek support from close others when they are distressed (Simpson, Rholes, & Nelligan, 1992). Rather, they cope with attachment-related threats by being self-reliant and distancing themselves emotionally from others. To keep their attachment systems deactivated, avoidant individuals suppress their emotions, especially those relevant to relationship issues.

Secure attachment can be conceptualized as the absence of attachment avoidance and anxiety. Highly secure individuals regulate their negative affect by seeking support and/or knowing that support is available if needed (Mikulincer & Shaver, 2007). This confidence enables securely attached people to resolve attachment-related threats so they can direct their attention to other important life issues.

Attachment and Relationship Satisfaction

Attachment anxiety. Because anxiously attached individuals focus on seeking and receiving support, their relationship satisfaction should be affected more strongly by threats to the availability of their attachment figures (romantic partners). In the current study, we tested two potential moderators of the link between attachment anxiety and relationship satisfaction: perceptions of support from the partner and perceptions of negative partner behaviors. We predicted that dissatisfaction would be higher among more anxiously attached individuals, particularly if they perceived their partners as not providing adequate support or behaving negatively toward them.

Relationship threat should be strengthened or attenuated depending on perceptions of a partner's willingness or ability to provide support. Despite the fact that perceived support is important to nearly everyone (McGonagle, Kessler, & Schilling, 1992), it is particularly important to highly anxious people, who crave support and may view it as an indicator of the health of their relationship. Consistent with this view, highly anxious wives tend to be more satisfied with their marriages 6 months after the birth of their first child, but only if they perceive their partners as highly supportive (Rholes et al., 2001). When perceiving high levels of support, highly anxious women also had husbands who were much more satisfied, less angry, and more supportive than the husbands of highly anxious women who perceived less support. Indeed, these husbands were more satisfied, less angry, and more supportive than even the husbands of less anxious (i.e., more secure) women. Thus, it appears that more partner support enhances relationship quality in both highly anxious women and their husbands.

Negative relationship exchanges that involve arguing, yelling, denigrating, or ignoring could signal a partner's emotional unavailability and/or lack of commitment to the relationship. Thus, negative partner behaviors should have a particularly detrimental impact on marital satisfaction among highly anxious individuals, who habitually question the strength of their relationship and their partner's love and commitment. When their partners behave negatively, highly anxious people become distressed (Feeney, 2004), and they often believe their partners may be hurting them intentionally (Sümer & Cozzarelli, 2004). These negative partner attributions may drive down relationship satisfaction. A partner's negative behavior also affects how highly anxious people respond to relationship conflict. When discussing major relationship disagreements, highly anxious individuals express greater hostility toward their partners, and they then report more negative perceptions of their partners and relationships (Simpson, Rholes, & Phillips, 1996). They also experience wider swings in perceptions of relationship quality on a daily basis (Campbell, Simpson, Boldry, & Kashy, 2005), indicating that relationship satisfaction is fragile in highly anxious individuals.

Attachment avoidance. For highly avoidant people, changes in relationship satisfaction should be most strongly influenced by factors that decrease their feelings of independence, autonomy, or control (Mikulincer, 1998). For this reason, we predicted that highly avoidant people would become less satisfied across the transition to parenthood, particularly if they perceived a decline in their autonomy or independence. Providing constant care to a young child can threaten one's independence and autonomy. Highly avoidant individuals find caregiving to be stressful, and they typically resent individuals for whom they must provide care (Bowlby, 1979). Providing care works against one's ability to maintain emotional distance in relationships, which is one means by which highly avoidant individuals achieve their autonomy-related goals. Supporting this view, highly avoidant individuals are less interested in being parents, view parenting as more stressful and less rewarding, and provide less support to their children (Rholes, Simpson, & Blakely, 1995; Rholes, Simpson, Blakely, Lanigan, & Allen, 1997; Rholes, Simpson, & Friedman, 2006). Accordingly, highly avoidant individuals should become less satisfied in their relationships across the transition to parenthood, especially when they feel unable to pursue personal activities that might help them remain autonomous and independent.

In the current study, we tested two potential moderators of the link between attachment avoidance and relationship satisfaction: work–family conflict and family demand. We expected that satisfaction would be lower among highly avoidant individuals, particularly if they perceived that their family situation was an obstacle to their autonomy and independence—that is, if they felt conflict between their work and family responsibilities and if they perceived their family as placing excessive demands on them.

When avoidant individuals feel they have insufficient independence, autonomy, or control in their relationships, they tend to withdraw emotionally from their partners (Overall & Sibley, 2009). This defensive detachment is one strategy that highly avoidant people use to dampen their attachment systems. This strategy, however, may be less effective in couples who have infants, who often require considerable and nearly constant care. Without the opportunity to detach, highly avoidant people may have more difficulty regulating their negative affect (Berant, Mikulincer, & Florian, 2001).

Chronic conflict between work and family roles should also reduce feelings of autonomy and independence. Highly avoidant individuals value achievement goals, which typically focus on the self (Feeney, 2008). They also view career involvement as one way to avoid intimacy with their families (Hazan & Shaver, 1990). Sustained work–family conflict may, therefore, lead highly avoidant people to perceive that their autonomy or independence is being unduly restricted by their new family responsibilities. Feeling unable to withdraw from these responsibilities, they may view their partners and relationships more negatively and become less satisfied over time. Similar to work–family conflict, highly

avoidant individuals should also become less satisfied when they feel their families are placing excessive demands on them. Family demand encompasses not only the amount and number of responsibilities that individuals have within their family but also the degree to which these responsibilities are tiring or difficult to manage. Thus, the perception of excessive family demands should also lead highly avoidant people to perceive reduced independence, autonomy, or control, thereby attenuating marital satisfaction.

Gender Differences in Marital Satisfaction

According to Schumm, Webb, and Bollman (1998), women are generally less satisfied in their marriages than men (but see Shapiro et al., 2000). However, the findings are inconsistent when it comes to gender differences in marital satisfaction trajectories across the transition to parenthood. Some researchers have found that wives experience sudden decreases in satisfaction after birth, whereas husbands tend to decline more gradually and do so later in the transition (Grote & Clark, 2001). Doss et al. (2009) found that both partners experience fairly steep declines in satisfaction immediately after birth, but wives decline more steeply than husbands do. Lawrence, Nylene, and Cobb (2007) found that only wives become less satisfied across the transition.

According to attachment theory, there is no reason to anticipate gender by attachment orientation interactions. However, the transition to parenthood presents very different challenges to women and men (Oakley, 1980). Women experience more physical issues, from pregnancy to childbirth recovery to hormonal changes during the postpartum period, and they typically perform more of the daily child care and household tasks. Thus, women's needs during the transition to parenthood are likely to differ from men's needs. For this reason, we investigated changes in satisfaction trajectories separately for women and men.

The Present Study

In this longitudinal study, we investigated changes in marital satisfaction for couples during the first 2 years of their transition to parenthood. Data were collected at five assessment waves, starting approximately 6 weeks before the birth of each couple's first child. The four postnatal assessment waves occurred at 6, 12, 18, and 24 months postpartum. At each wave, both partners completed several self-report measures, including their attachment orientations, perceptions of partner support, work–family conflict, family demand, and negative social exchanges with their partners. The following hypotheses were tested:

Attachment anxiety hypotheses. Highly anxious individuals should feel less satisfied in their marriages, and their satisfaction should decline across the transition to parenthood. However, the anxiety–satisfaction link should be moderated

by perceived partner support and negative social exchange with the partner.

Hypothesis 1: Among persons high in anxiety (compared with their less anxious counterparts), relationship satisfaction should be lower and should decline over time, particularly when highly anxious individuals perceive their partners to be less supportive.

Hypothesis 2: Among persons high in anxiety (compared with those low in anxiety), relationship satisfaction should be lower and should decline over time, particularly for individuals who perceive that their partners are directing more negative behaviors toward them.

Attachment avoidance hypotheses. Highly avoidant individuals should also report feeling less satisfied in their relationships, and their satisfaction should also decline across the transition period. However, the avoidance-satisfaction link should be moderated by work–family conflict and family demand.

Hypothesis 3: Among persons high in avoidance, relationship satisfaction should be lower and should decline over time, particularly when individuals experience greater work–family conflict.

Hypothesis 4: Among persons high in avoidance, relationship satisfaction should be lower and should decline over time, particularly for individuals who perceive that their family responsibilities are more demanding.

Method

Participants

We recruited 192 couples (at Time 1) who lived in a southwestern U.S. city. Partners were living together and expecting their first child. There were 165 couples at Time 2, 153 couples at Time 3, 151 couples at Time 4, and 137 couples at Time 5 (24 months after childbirth). Fifty-five couples dropped out during the study.¹

Couples were recruited from childbirth classes at a local hospital. Approximately 45% of the couples initially approached agreed to participate. Ethnic backgrounds were Caucasian (82%), Asian (9%), and Hispanic (9%). All but 6% of participants had some college education. Household income was moderate; 16% of the sample earned an annual household income below US\$25,000, 46% earned US\$25,000 to US\$55,000 per year, 38% earned more than US\$55,000, and 6% earned more than US\$100,000. At Time 1, the mean ages of women and men were 26.7 ($SD = 4.1$) and 28.4 ($SD = 4.4$) years, respectively. Only 5% of couples at Time 1 were living together but not married. Unmarried couples had been

cohabiting for a mean of 1.85 years ($SD = 2.2$). Married couples had been married for a mean of 3.3 years ($SD = 2.6$). For additional sample information, see Rholes et al. (2011).

Procedures

Couples were recruited from childbirth classes and through fliers. To participate, couples had to be married or living together with their partner, and both partners had to be expecting their first child. Approximately 6 weeks prior to their expected due date (Time 1), each partner was mailed self-report measures to complete privately and independently. Each partner then received the postnatal measures at approximately 6 months (Time 2), 12 months (Time 3), 18 months (Time 4), and 24 months (Time 5) after the baby's birth date. (At about 6 months after their babies' births, each couple also came in for a laboratory interaction session, which is not discussed in this article.) At each assessment wave, partners were instructed to complete their questionnaires privately and independently and to return them in separate mailed envelopes. Participants were explicitly instructed not to talk to or consult with their partners when completing the surveys. Couples were paid US\$50 for completing each of the Time 1 to 3 questionnaires. To minimize attrition, payment was increased to US\$75 per couple for completing the Time 4 and 5 questionnaires. Couples in which both partners completed and returned their questionnaires from every phase of the study were entered into a random drawing for two US\$500 cash rewards.

Measures

All participants completed the following measures at each assessment wave. Analyses used only prenatal scores for the predictor variables (i.e., for all measures except marital satisfaction, which was the primary dependent measure). Cronbach's alphas for each measure are reported in Table 1.

Relationship satisfaction. The 10-item satisfaction subscale of the Dyadic Adjustment Scale (Spanier, 1976) assessed relationship satisfaction. Most items were rated on a 6-point scale, anchored 0 (*never*) to 5 (*all the time*). Sample items are "In general, how often do you think that things between you and your partner/spouse are going well?" and "How often do you and your partner/spouse quarrel?" (reverse-scored). Participants also rated their overall happiness with the relationship on a 7-point scale, anchored 0 (*extremely unhappy*) to 6 (*perfect*). With a possible maximum score of 50, higher scores indicated greater relationship satisfaction.

Attachment orientations. Attachment avoidance and anxiety were measured by an adapted version of the Experience in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998). This 36-item scale was adapted to ask participants to rate how they viewed romantic partners/relationships *in general*. Each item was answered on a 7-point scale, anchored 1 (*strongly disagree*) to 7 (*strongly agree*). Eighteen items

Table 1. Means, Standard Deviations, and Reliabilities for Prenatal Predictors and Marital Satisfaction Over Time

Variable	Men		Women		<i>r</i>
	<i>M</i> (<i>SD</i>)	α	<i>M</i> (<i>SD</i>)	α	
Marital satisfaction					
Prenatal	42.41 (5.29)	.83	42.88 (4.99)	.86	.57***
6 months	42.29 (4.99)	.83	42.29 (4.73)	.81	.53***
12 months	41.59 (6.84)	.89	42.50 (4.88)	.81	.42***
18 months	41.30 (6.53)	.89	42.42 (5.65)	.85	.50***
24 months	40.96 (6.86)	.84	41.54 (6.77)	.89	.63***
Prenatal predictors					
Attachment anxiety	2.74 (0.91)	.89	3.34 (1.06)	.90	.24***
Attachment avoidance	2.50 (0.92)	.84	2.35 (0.93)	.92	.18**
Perceived social support	6.00 (0.87)	.91	6.18 (0.79)	.90	.23***
Negative social exchange	2.59 (1.40)	.96	2.00 (1.08)	.96	.47***
Work–family conflict	3.34 (1.27)	.79	2.84 (1.41)	.81	.07
Family demand	4.04 (1.25)	.72	4.12 (1.25)	.80	.26***

Note: Alpha values are Cronbach's alphas, indicating high reliability. Pearson's *r* indicates the correlations between measures collected from each partner (e.g., the correlation between husbands' and wives' perceived social support).

p* < .05. *p* < .01. *****p* < .001.

assessed avoidance (e.g., “I prefer not to show partners how I feel deep down”), and 18 items assessed anxiety (e.g., “My desire to be very close sometimes scares people away”). Mean scores were computed across items for each dimension. Higher scores indicated greater attachment avoidance or anxiety.

Perceived social support available from partner. The Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983) measured perceptions of the amount of social support available from the partner. The scale contained 7 items (e.g., “How much can you count on your partner/spouse to make you feel more relaxed when you are under pressure?”). Items were answered on a 7-point scale, anchored 1 (*not at all*) to 7 (*very much*). Mean scores were computed across items. Higher scores indicated more available social support.

Negative social exchange received. The 24-item Test of Negative Social Exchange (Finch, Okun, Pool, & Ruehlman, 1999) assessed perceptions of the frequency with which the partner acted negatively toward the self during the past month (e.g., “put me down,” “lost his/her temper with me,” “seemed bored with me.”) Items were answered on a 9-point scale, anchored 1 (*not at all*) to 9 (*frequently*). Mean scores were computed across items. Higher scores indicated perceptions of having received more frequent negative behavior from the partner.

Family demand and work–family conflict. Family demand and work–family conflict were assessed by a scale developed by Yang, Chen, Choi, and Zou (2000). Items for both measures were answered on a 7-point scale, anchored 1 (*not at all/never*) to 7 (*a lot/often*). *Family demand* assessed perceptions that family responsibilities were overwhelming, very time-consuming, or difficult to fulfill. Sample items

included “How often do family duties and responsibilities make you feel tired out?” and “How difficult is it for you to do everything that you should as a family member?” Higher scores indicated perceptions that the family placed more demands on the individual.

Work–family conflict assessed perceptions of conflict and interference between one's job and family responsibilities. The three items were “How much conflict do you feel there is between the demands of your job and your family life?” “How much does your job situation interfere with your family life?” and “How much does your family situation interfere with your job?” Higher scores indicated greater work–family conflict.

Data Structure

Dyadic growth curve models were tested using multilevel modeling (Kashy & Donnellan, 2008). Dyadic interdependence was modeled in two ways: (a) as similarity on the outcome at birth (i.e., by including a correlation between the spouses' intercepts) and (b) as unique similarity at the specific time-points (i.e., by including a correlation between the spouses' time-specific residuals).²

Data were also structured for analysis using the actor–partner interdependence model (APIM; Kashy & Kenny, 2000; Kenny, 1996). The APIM specifies that a person's outcome may be a function of the person's own predictor scores (actor effect) and of his or her partner's predictor scores (partner effect). For example, one can test whether marital satisfaction is lower for more anxious individuals (actor effect) and/or for individuals who have more anxious partners (partner effect). By including both actor and partner effects in a

model, one can also test the unique predictive value of actor or partner predictors, controlling for any variance they share.

For growth curve models, time-zero was defined as the date of birth, and the Time variable was scored in months since childbirth. Although there were five assessment waves, the exact timing of each assessment varied slightly across couples. To account for this variation, we computed months relative to childbirth based on when participants actually completed each questionnaire. Standard deviations for Time within each assessment wave ranged from 0.36 months to 1.23 months. Because time-zero was set at childbirth, the intercept indicates marital satisfaction at childbirth, and the slope for Time represents the degree to which satisfaction changes each month. Gender was coded -1 for women and 1 for men. All continuous predictor variables were centered on the grand mean (Aiken & West, 1991).

Data Analytic Models

Growth curve models estimated initial levels and change trajectories of satisfaction over the first 2 years of the transition to parenthood. Moderated growth models of satisfaction examined linear change in satisfaction over time, moderated by each partner's attachment orientations and perceptions of the relationship. These models included fixed effects for attachment (anxiety or avoidance), gender, and the hypothesized moderator (e.g., perceived support). All attachment and moderator variables were measured at the prenatal assessment wave. All interactions were included, resulting in four possible four-way interactions between time, gender, attachment, and the moderator: actor anxiety and actor moderator, actor avoidance and actor moderator, partner anxiety and partner moderator, and partner avoidance and partner moderator. Only models with significant (and attachment-relevant) interactions are presented below. Tables show unstandardized regression coefficients for each effect. Significant interactions are graphed using 1 *SD* above and below the grand mean as high and low values for continuous predictors (Aiken & West, 1991).

Results

Preliminary Analyses

Table 1 presents means and standard deviations for the main variables at Time 1 and for marital satisfaction at each wave, separately by gender. Table 1 also shows the correlation between husbands and wives on each variable. There was a sizable correlation between husbands' and wives' marital satisfaction at each assessment wave, indicating nonindependence between dyad members. Thus, we controlled for this covariation in the multilevel models. Table 2 presents correlations between the variables assessed at Time 1.

Before testing attachment-related effects, we tested a growth curve model that included only the linear and quadratic effects of time. Neither the quadratic fixed effect, $b = -0.001$,

$t(466) = 0.59$, $p = .56$, nor the variance for the quadratic effect (Var = 0.000, Wald $Z = 1.37$, $p = .17$) were statistically significant, so we removed these elements from the model and reran the analysis. In the next models, we also examined whether there were significant gender differences in the fixed and random effects. A chi-square difference test indicated that gender did not moderate the fixed effects, $\chi^2(2) = 4.34$, $p = .11$. On average, marital satisfaction declined significantly over time, $b = -0.067$, $t(176) = 3.99$, $p < .001$. Thus, predicted satisfaction levels can be calculated as Satisfaction = $42.65 - 0.067(\text{Time})$, where Time is the number of months after the child's birth. In contrast, gender did moderate the random effects, $\chi^2(3) = 23.97$, $p < .001$. Although the average trajectory (fixed effect) for men and women did not differ, there were gender differences in the intercept variances, slope variances, and residuals such that men were more variable at the child's birth, more variable in terms of change over time, and more variable in their unexplained variance. For this reason, all subsequent analyses maintained a random effect model that allowed for gender differences in the random effects, including the intercepts, time slopes, and residual variances.

All of the variances and correlations specified as random effects in this basic model were statistically significant. The intercept variances were Var = 17.17 and Var = 16.48 for men and women, respectively. The correlation between the intercepts, which measures the association between partners' marital satisfaction scores at the baby's birth, was $r = .74$, Wald $Z = 6.23$, $p < .001$. There was also a significant time-specific correlation of the residuals, $r = .24$, Wald $Z = 5.18$, $p < .001$. Finally, the slopes for time varied significantly, Var = 0.046 for men and Var = 0.031 for women, with a significant correlation between the time slopes, $r = .60$, Wald $Z = 4.09$. Thus, the effects of time differed across couples. Within couples, partners had similar trajectories. In other words, different couples changed at different rates, but within the same couple, husbands and wives had similar patterns of change.

Attachment-Only Model

This model predicted marital satisfaction using gender, time, and attachment avoidance and anxiety, including partner terms and interaction effects (see Table 3). A significant main effect revealed that satisfaction declined over time.

Actor effects. There was also a significant main effect for actor avoidance, with higher avoidance predicting lower satisfaction. In addition, there was a significant two-way interaction between gender and actor anxiety, but this occurred within a three-way interaction involving time (see Figure 1). When men were more anxiously attached before their baby's birth, their satisfaction declined steeply across the transition to parenthood, $b = -0.160$, $t(189) = 3.75$, $p < .001$. Satisfaction also declined for some highly anxious women, though not significantly, $b = -0.047$, $t(190) = 1.97$, $p = .051$. At lower levels of prenatal attachment anxiety, men's satisfaction declined slightly,

Table 2. Correlations for Study Variables at Time 1 for Men and Women

Variable	1	2	3	4	5	6	7
1. Marital satisfaction	—	-.28****	-.34****	.58****	-.67****	-.18**	-.10
2. Anxiety	-.07	—	.18**	-.33****	.40****	.15**	.18**
3. Avoidance	-.33****	.26****	—	-.27****	.29****	.004	.09
4. Perceived support	.41****	-.27****	-.53****	—	-.65****	-.16**	-.10
5. Negative exchange	-.52****	.25****	.33****	-.45****	—	.22**	.14**
6. Work–family conflict	-.09	.25****	.19**	-.21**	.31****	—	.49****
7. Family demand	-.06	.22**	.15**	-.09	.29****	.42****	—

Note: Correlations among variables collected from men (husbands) appear below the diagonal; correlations among variables collected from women (wives) appear above the diagonal.

** $p < .05$. *** $p < .01$. **** $p < .001$.

Table 3. Marital Satisfaction as a Function of Actors' and Partners' Attachment Anxiety and Avoidance

Fixed effects	Actor	Partner
Intercept	42.957****	
Gender	0.022	
Time	-0.090****	
Gender × Time	-0.018	
Anxiety	-0.394*	-0.734***
Gender × Anxiety	0.533**	-0.576**
Time × Anxiety	-0.012	0.003
Gender × Time × Anxiety	-0.037**	0.024
Avoidance	-1.410****	-0.374
Gender × Avoidance	-0.020	0.020
Time × Avoidance	0.005	0.011
Gender × Time × Avoidance	0.002	0.007

Note: For gender, 1 = men, -1 = women.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

$b = -0.057$, $t(181) = 1.99$, $p = .048$, whereas women's satisfaction declined more steeply, $b = -0.098$, $t(190) = 3.03$, $p = .003$.

Partner effects. This model also revealed a main effect for partner's attachment anxiety, which emerged within a significant two-way interaction between actor's gender and partner's anxiety (see Figure 2). For men, satisfaction was lower across the transition when their wives were more anxiously attached before the child's birth, $b = -1.310$, $t(199) = 3.90$, $p < .001$. Women reported a moderate level of satisfaction, regardless of their husbands' anxiety levels.

Perceived Social Support (Hypothesis 1)

This model predicted marital satisfaction using gender, time, attachment avoidance and anxiety, and perceived social support, including partner terms and interaction effects (see Table 4). As in the attachment-only model, a significant main effect revealed that satisfaction declined over time.

Actor effects. There were significant main effects for actor's avoidant attachment and actor's perceptions of their partner's

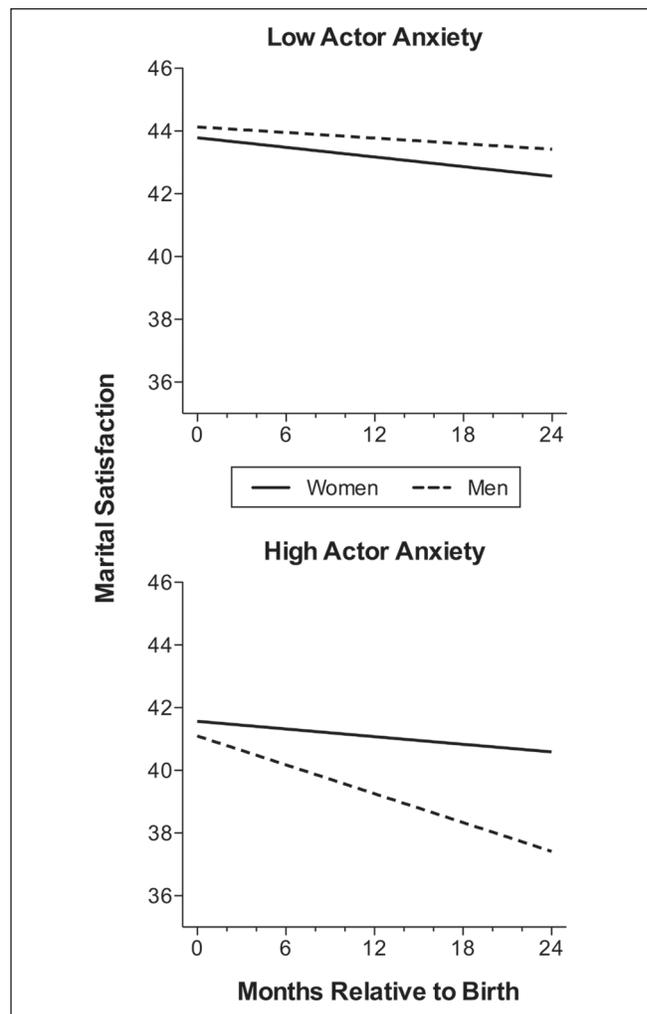


Figure 1. Linear change in marital satisfaction over time, moderated by gender and actors' attachment anxiety

supportiveness. Furthermore, there was a significant three-way interaction between gender, time, and actor's anxiety. The analysis also revealed a significant two-way interaction between

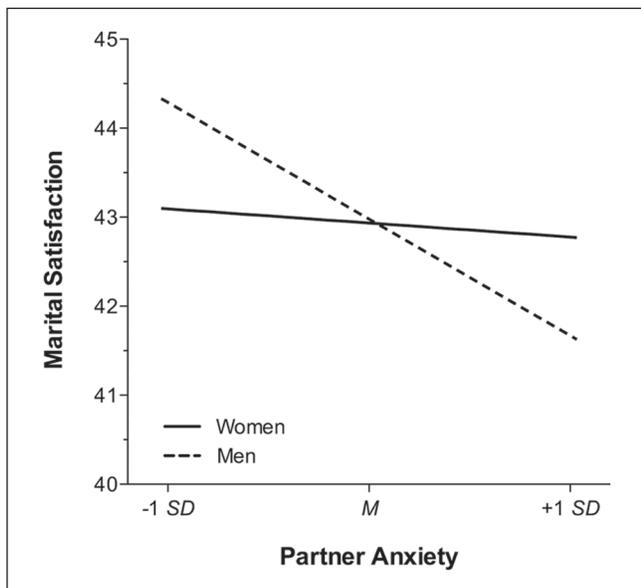


Figure 2. Satisfaction as moderated by gender and partners' attachment anxiety

anxiety and support, which occurred within a significant three-way interaction involving gender (see Figure 3). When men and women perceived more support during the prenatal period, they were highly satisfied with their relationship, regardless of their anxiety levels. In fact, at higher anxiety levels, women reported more satisfaction, $b = 0.702$, $t(218) = 2.16$, $p = .032$. When individuals perceived less available support from their partners, they reported less satisfaction overall. For women, higher anxiety was strongly associated with lower satisfaction, $b = -1.647$, $t(222) = 4.45$, $p < .001$. For men, satisfaction was lower, regardless of their anxiety level.

Partner effects. This model revealed a significant main effect for partner's support, indicating that individuals were less satisfied when their partners perceived them as less supportive. There was also a significant main effect for partner's anxiety, which occurred within a significant three-way interaction between gender, partner's anxiety, and partner's perceptions of support (see Figure 4). When their partners perceived them as more supportive, individuals reported higher satisfaction, regardless of their gender or their partners' anxiety levels. However, when partners perceived less support, men's satisfaction was lower when their wives were more anxiously attached, $b = -1.867$, $t(214) = 4.21$, $p < .001$. For women whose partners perceived less support, satisfaction was moderate and not associated with their partners' anxiety.

Perceived Negative Exchange Received (Hypothesis 2)

This model predicted marital satisfaction using gender, time, attachment avoidance and anxiety, and perceptions of

negative exchange received, including partner terms and interaction effects (see Table 5). A significant main effect showed that satisfaction declined over time.

Actor effects. This model revealed significant main effects for negative exchange and avoidant attachment, showing that satisfaction was lower when individuals were more avoidant or perceived their partners as behaving more negatively toward them. As in the attachment-only model, there was a significant three-way interaction between gender, time, and anxious attachment. There was also a significant two-way interaction between anxiety and negative exchange, which occurred within a significant three-way interaction involving gender (see Figure 5). When individuals perceived less negative exchange from their partners, they remained highly satisfied across the transition, with higher anxiety predicting slightly higher satisfaction for women, $b = 0.688$, $t(226) = 2.08$, $p = .039$. However, high negative exchange was associated with lower satisfaction. While men's satisfaction was not associated with their anxiety levels, women reported less satisfaction if they were more anxiously attached, $b = -1.130$, $t(239) = 2.48$, $p = .014$.

Partner effects. There was a significant main effect for partner's perceptions of negative exchange, indicating that individuals were less satisfied when their partners reported receiving more negative behaviors from them. There was also a significant three-way interaction between gender, partner's avoidance, and partner's perceptions of negative exchange (see Figure 6). Individuals maintained higher satisfaction levels when their partners perceived less negative exchange, although men's satisfaction was slightly (but not significantly) lower when their wives were more avoidant. Individuals reported less satisfaction across the transition when their partners perceived more negative exchange. Men were more satisfied (though not significantly) when their wives also reported being more avoidant, $b = 1.053$, $t(209) = 1.77$, $p = .078$. Women's satisfaction was not associated with their husbands' avoidance levels.

Work-Family Conflict (Hypothesis 3)

This model predicted marital satisfaction using gender, time, attachment avoidance and anxiety, and work-family conflict, including partner terms and interaction effects (see Table 6). A significant main effect showed that satisfaction declined over time.

Actor effects. For avoidance-related effects, this model revealed a main effect for avoidance, which occurred within a significant three-way interaction between time, avoidant attachment, and work-family conflict (see Figure 7). As hypothesized, when individuals experienced greater work-family conflict before the child's birth, less avoidant individuals remained highly satisfied across the transition. Highly avoidant people, on the other hand, were less satisfied at birth and declined steeply over the transition, $b = -0.111$, $t(229) = 3.19$, $p = .002$. When prenatal work-family

Table 4. Marital Satisfaction as a Function of Actor and Partner Attachment Orientations, Moderated by Perceived Social Support

Fixed effects	Actor effects			Partner effects		
	Nonattachment	Anxiety	Avoidance	Nonattachment	Anxiety	Avoidance
Intercept	43.038***					
Gender	-0.007					
Time	-0.099***					
Gender × Time	-0.015					
Support	1.648***			0.874***		
Gender × Support	0.144			-0.146		
Time × Support	0.031			0.005		
Gender × Time × Support	0.012			-0.009		
Attachment		-0.070	-0.887***		-0.577***	0.145
Gender × Attachment		0.403*	0.025		-0.350	-0.124
Time × Attachment		-0.012	0.016		0.006	0.015
Attachment × Support		0.708***	-0.037		0.347	-0.012
Gender × Time × Attachment		-0.041**	0.010		0.020	0.005
Gender × Attachment × Support		-0.685***	-0.467*		0.776***	-0.038
Time × Attachment × Support		-0.029*	-0.021		0.008	-0.006
Gender × Time × Attachment × Support		-0.005	0.017		-0.012	-0.002

Note: Gender refers to the actor's gender (1 = men, -1 = women). For actor effects, perceived support, anxiety, and avoidance indicate the actors' responses. For partner effects, perceived support, anxiety, and avoidance are the partners' responses.
 * $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

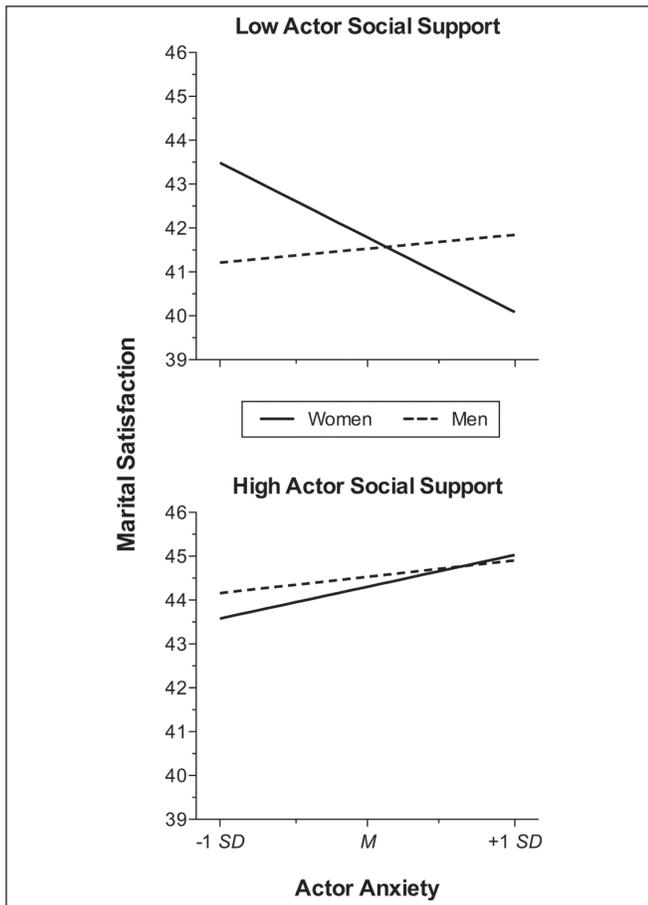


Figure 3. Satisfaction as moderated by gender, actors' attachment anxiety, and actors' perceptions of social support received

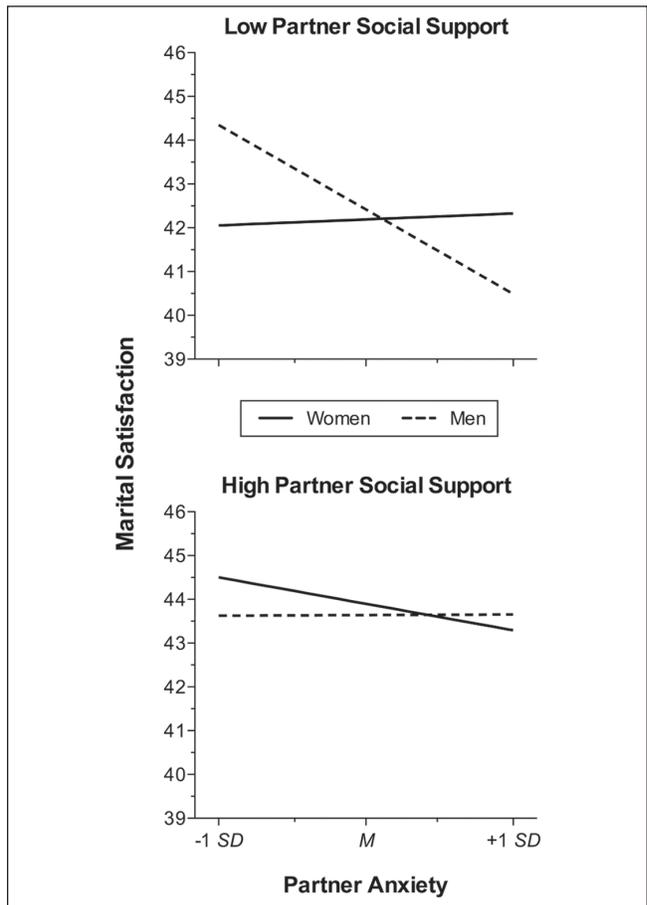


Figure 4. Satisfaction as moderated by gender, partners' attachment anxiety, and partners' perceptions of social support received

Table 5. Marital Satisfaction as a Function of Actor and Partner Attachment Orientations, Moderated by Negative Exchange Received

Fixed effects	Actor effects			Partner effects		
	Nonattachment	Anxiety	Avoidance	Nonattachment	Anxiety	Avoidance
Intercept	42.910***					
Gender	0.069					
Time	-0.092***					
Gender × Time	0.006					
Negative exchange	-1.368***			-0.629**		
Gender × Negative exchange	0.176			-0.197		
Time × Negative exchange	-0.019			0.012		
Gender × Time × Negative exchange	0.005			0.020		
Attachment		0.031	-0.880***		-0.388*	0.118
Gender × Attachment		0.252	0.015		-0.297	0.112
Time × Attachment		-0.006	0.010		0.001	0.007
Attachment × Negative exchange		-0.356**	-0.198		-0.261	0.221
Gender × Time × Attachment		-0.041**	0.001		0.020	0.003
Gender × Attachment × Negative exchange		0.354**	0.047		-0.216	0.421**
Time × Attachment × Negative exchange		0.020	0.008		-0.007	-0.004
Gender × Time × Attachment × Negative exchange		-0.014	-0.016		-0.004	-0.006

Note: Gender refers to the actor's gender (1 = men, -1 = women). For actor effects, negative exchange received, anxiety, and avoidance indicate the actors' responses. For partner effects, negative exchange received, anxiety, and avoidance are the partners' responses.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

conflict was lower, less avoidant people were highly satisfied at birth but declined to moderate satisfaction levels over time, $b = -0.115$, $t(213) = 3.09$, $p = .002$. Highly avoidant individuals were less satisfied at birth but remained stable over time.

For anxiety-related effects, there was a significant four-way interaction between gender, time, actor anxiety, and actor work-family conflict (see Figure 8). When anxiety and work-family conflict were both high, men were more satisfied at birth but declined steeply across the transition, $b = -0.171$, $t(177) = 3.56$, $p < .001$. Women were moderately satisfied at birth and remained stable over time. At high levels of work-family conflict, less anxious individuals were more satisfied at birth. However, women declined across the transition, $b = -0.114$, $t(188) = 2.11$, $p = .036$. At low levels of work-family conflict, individuals were highly satisfied at birth. Satisfaction at birth was slightly higher for less anxious individuals than more anxious ones. However, less anxious men declined significantly across the transition, $b = -0.094$, $t(171) = 2.10$, $p = .036$.

Partner effects. The only significant partner effect was a main effect for partner's attachment anxiety, which revealed that individuals reported less marital satisfaction when their partners were more anxiously attached.

Family Demand (Hypothesis 4)

This model predicted marital satisfaction using gender, time, attachment avoidance and anxiety, and family demand, including partner terms and interaction effects (see Table 7).

A significant main effect showed that satisfaction declined over time.

Actor effects. There were two significant main effects: family demand and avoidant attachment. These emerged within a significant two-way interaction (see Figure 9). When individuals perceived greater demands from their families, higher avoidance was strongly associated with lower satisfaction, $b = -2.075$, $t(301) = 6.14$, $p < .001$. At lower levels of family demand, higher avoidance was associated with slightly (but not significantly) lower satisfaction, $b = -0.615$, $t(315) = 1.73$, $p = .084$.

Partner effects. This model revealed two significant partner main effects. The main effect for partner's attachment anxiety showed that individuals reported less satisfaction when they had more anxious partners. There was also a significant main effect for partner's perceptions of family demand, which occurred in a significant two-way interaction between partner's avoidance and partner's family demand (see Figure 10). Individuals reported high satisfaction when their partners reported less family demand, regardless of their partners' avoidance levels. However, when partners reported greater family demand, individuals who had highly avoidant partners experienced less satisfaction, $b = -0.895$, $t(301) = 2.61$, $p = .009$.

Discussion

In this longitudinal study, we examined trajectories of change in marital/relationship satisfaction across the first 2 years of the transition to parenthood. Two key sets of results emerged.

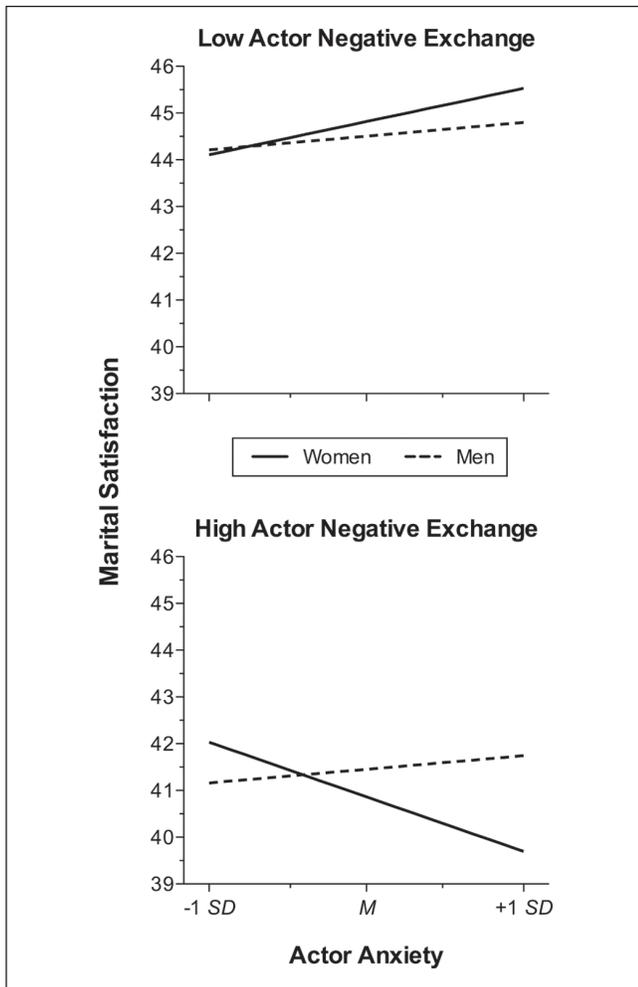


Figure 5. Satisfaction as moderated by gender, actors' attachment anxiety, and actors' perceptions of negative exchange received

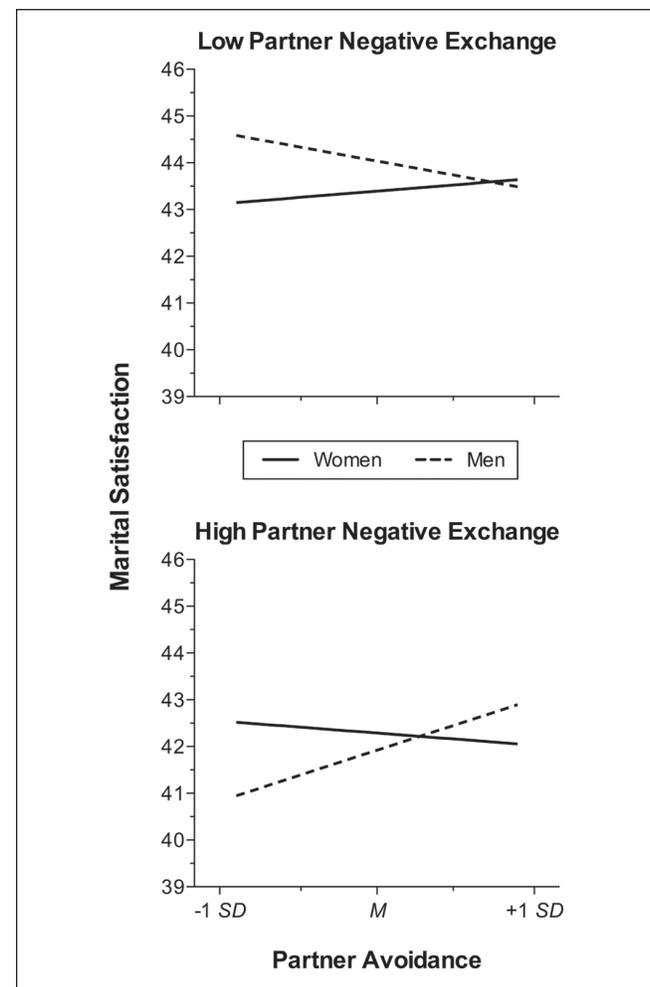


Figure 6. Satisfaction as moderated by gender, partners' attachment avoidance, and partners' perceptions of negative exchange received

First, anxiously attached individuals reported relatively lower marital satisfaction, especially when they perceived threats to their romantic relationship. Second, avoidantly attached individuals were also less satisfied, primarily when they perceived threats to their independence/autonomy.

Findings for Actors' Anxious Attachment

Among highly anxious individuals, changes in satisfaction should be tied to relationship variables that calm or aggravate fears of being rejected or abandoned by their romantic partners. We tested two possible moderators of the anxiety–satisfaction connection: perceptions of support available from the partner and perceptions of negative exchanges with the partner.

As hypothesized, perceived support moderated the link between attachment anxiety and satisfaction among actors. When they perceived support to be low, men were somewhat

less satisfied across the transition period, regardless of their anxiety levels. Highly anxious women, however, reported lower levels of satisfaction than less anxious (more secure) women did when they perceived less partner support. When perceived support was high, satisfaction was relatively high and was not associated with attachment anxiety in men. Among women who perceived greater support, those who were more anxious actually reported higher satisfaction. These results highlight the importance of support for anxiously attached women during the transition to parenthood.

The anxiety–satisfaction link was also moderated by actors' perceptions of negative behavior displayed by their partners. Highly anxious women were less satisfied across the transition but primarily when they perceived their partners behaving more negatively toward them. At higher levels of negative exchange, anxious men were not different from less anxious (more secure) men in satisfaction, however. These results compliment the perceived support findings

Table 6. Marital Satisfaction as a Function of Actor and Partner Attachment Orientations, Moderated by Work–Family Conflict

Fixed effects	Actor effects			Partner effects		
	Nonattachment	Anxiety	Avoidance	Nonattachment	Anxiety	Avoidance
Intercept	42.865***					
Gender	0.017					
Time	-0.075***					
Gender × Time	-0.014					
Work conflict	-0.286			-0.140		
Gender × Work conflict	0.212			-0.094		
Time × Work conflict	0.001			-0.006		
Gender × Time × Work conflict	-0.004			0.020*		
Attachment		-0.419	-1.351***		-0.746***	-0.313
Gender × Attachment		0.424	0.064		-0.494*	-0.040
Time × Attachment		-0.001	0.0003		0.017	-0.002
Attachment × Work conflict		-0.020	-0.212		-0.068	-0.182
Gender × Time × Attachment		-0.032*	0.007		0.022	-0.008
Gender × Attachment × Work conflict		0.311*	-0.042		-0.128	0.033
Time × Attachment × Work conflict		-0.006	-0.031**		0.003	-0.017
Gender × Time × Attachment × Work conflict		-0.025**	-0.021		0.012	-0.004

Note: Gender refers to the actor's gender (1 = men, -1 = women). For actor effects, work–family conflict, anxiety, and avoidance indicate the actors' responses. For partner effects, work–family conflict, anxiety, and avoidance are the partners' responses.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

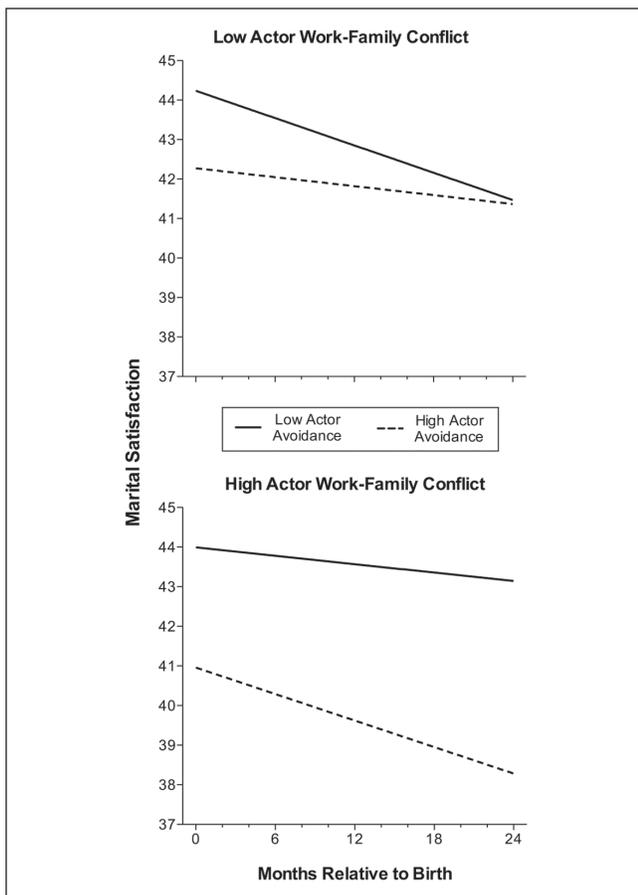


Figure 7. Linear changes in satisfaction over time, as moderated by actors' attachment avoidance and actors' perceptions of work–family conflict

because both sets of results indicate that anxious women are strongly affected by their partners' behavior. These findings are also consistent with and extend the transition to parenthood literature. Rholes et al. (2001), for example, found that highly anxious wives remained satisfied across the first 6 months of parenthood if they believed their husbands were more supportive and less negative. The current results extend Rholes et al. by including findings for men and by examining effects beyond the first 6 months of the transition.

There are at least two processes that may account for these results. First, insecure attachment may be an enduring vulnerability that hinders the ability to cope with stressful events (Karney & Bradbury, 1995). Insecure individuals are, in fact, less flexible in problem-solving and decision-making tasks, indicating poorer adaptability (Mikulincer & Sheffi, 2000). However, the presence of adaptive processes, such as greater partner support or less negativity, may temper these vulnerabilities. If so, healthier relationship patterns could bypass attachment insecurities, even during stressful times. Second, positive experiences with partners during the transition may lead highly anxious people to feel more secure with their partners (Treboux, Crowell, & Waters, 2004). Consistent with this notion, the formation and maintenance of a satisfying relationship can, at times, increase attachment security (Feeney & Noller, 1992; Hammond & Fletcher, 1991). For example, security tends to increase when people have positive interactions with their partners or when they are repeatedly primed with thoughts that their partners are available and responsive to their needs (Davila & Sargent, 2003; Gillath, Selcuk, & Shaver, 2008). For highly anxious new parents, positive relationship experiences may sustain

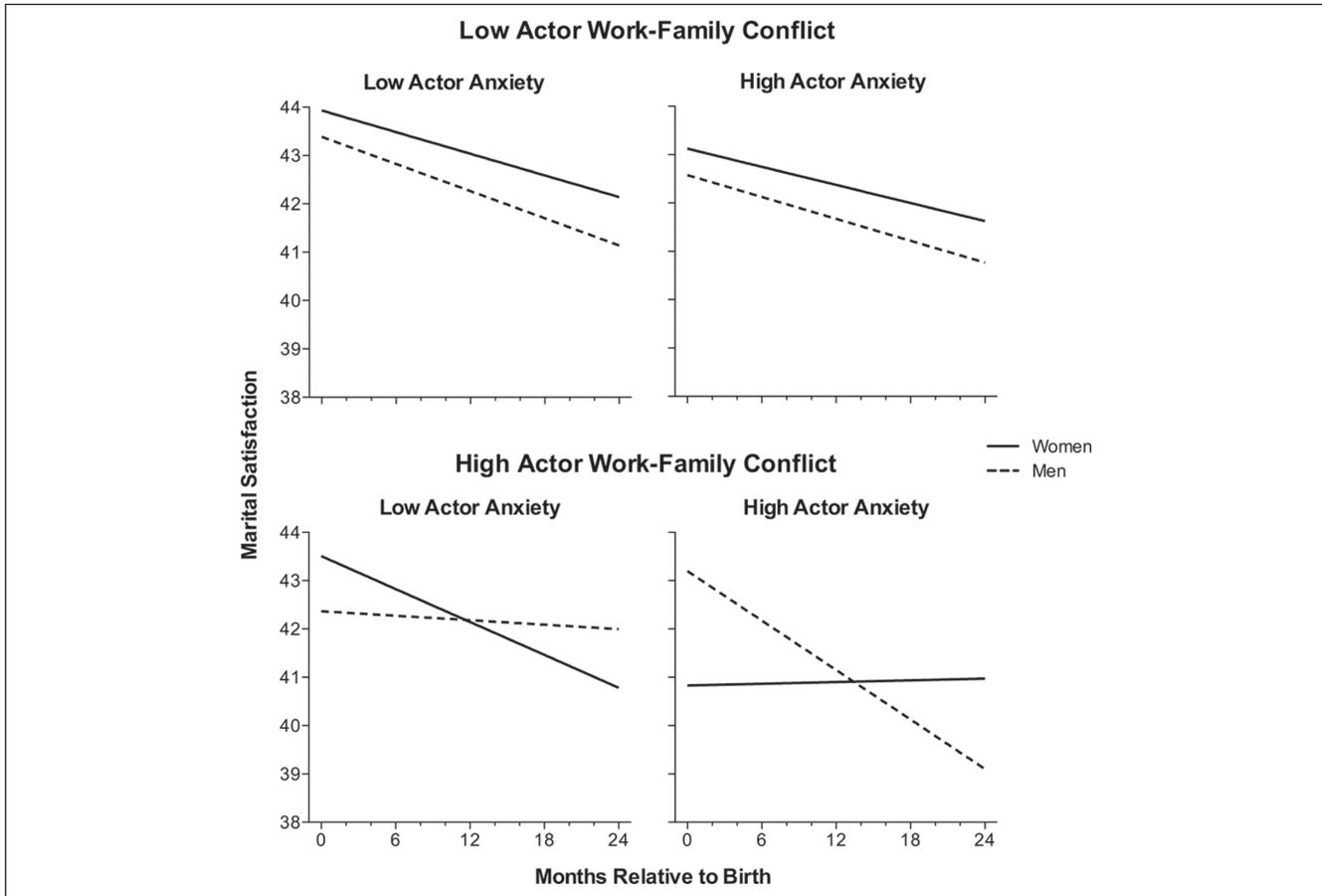


Figure 8. Linear changes in satisfaction over time, as moderated by gender, actors' attachment anxiety, and actors' perceptions of work-family conflict

Table 7. Marital Satisfaction as a Function of Actor and Partner Attachment Orientations, Moderated by Family Demand

Fixed effects	Actor effects			Partner effects		
	Nonattachment	Anxiety	Avoidance	Nonattachment	Anxiety	Avoidance
Intercept	43.033***					
Gender	-0.005					
Time	-0.084***					
Gender × Time	-0.013					
Family demand	-0.215***			-0.259***		
Gender × Family demand	-0.021			-0.041		
Time × Family demand	-0.016			0.011		
Gender × Time × Family demand	-0.027*			-0.024*		
Attachment		-0.299	-1.345***		-0.700***	-0.304
Gender × Attachment		0.313	0.034		-0.294	-0.094
Time × Attachment		-0.012	0.004		0.0003	0.009
Attachment × Family demand		-0.270	-0.586***		0.329*	-0.474**
Gender × Time × Attachment		-0.033*	0.0004		0.015	0.008
Gender × Attachment × Family demand		0.192	-0.129		0.063	0.185
Time × Attachment × Family demand		-0.004	-0.010		-0.018	-0.002
Gender × Time × Attachment × Family demand		-0.004	-0.010		-0.012	-0.008

Note: Gender refers to the actor's gender (1 = men, -1 = women). For actor effects, family demand, anxiety, and avoidance indicate the actors' responses. For partner effects, family demand, anxiety, and avoidance are the partners' responses.

* $p < .10$. ** $p < .05$. *** $p < .01$. **** $p < .001$.

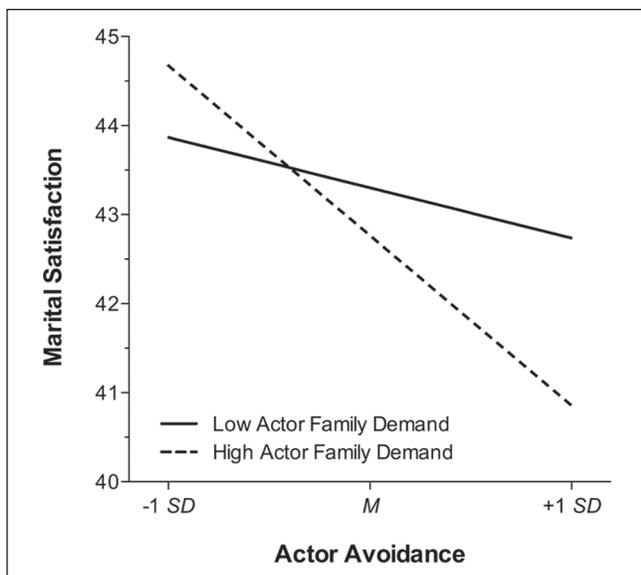


Figure 9. Satisfaction as moderated by actors' attachment avoidance and actors' perceptions of family demand

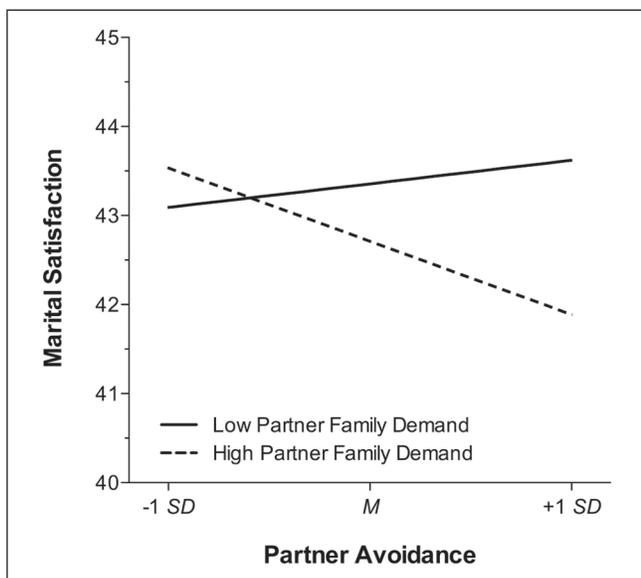


Figure 10. Satisfaction as moderated by partners' attachment avoidance and partners' perceptions of family demand

satisfaction by buffering them against their insecure working models or by altering the sometimes caustic behavioral patterns they display in their relationships.

Findings for Actors' Avoidant Attachment

Actors' marital satisfaction was also related to their avoidance and perceptions of both work–family conflict and family demands. Higher avoidance predicted general

declines in satisfaction over time, but the declines were steeper when conflict was perceived to be high. Perceptions of family demand also moderated the link between avoidance and marital satisfaction. When demand was perceived to be high, highly avoidant people were less satisfied compared with less avoidant (more secure) people. When family demand was perceived to be lower, highly avoidant people were also less satisfied, but the difference between high and low avoidant people was smaller.

To our knowledge, this is the first research to examine the role of work–family conflict and family demand as moderators of the connection between adult attachment orientations and marital satisfaction. According to attachment theory (Bowlby, 1973, 1979), highly avoidant people are troubled by the prospect of having to become caregivers. Consistent with this premise, they view infant care as particularly stressful, onerous, and unrewarding (Rholes et al., 2006). When family demands and work–family conflict are high, it is difficult for more avoidant people to satisfy their needs to be emotionally autonomous and avoid caregiving. This may explain the very low levels of satisfaction among highly avoidant people when work–family conflict and family demands are high.

Partner Effects

Actors' marital satisfaction was also related to their partners' anxiety levels and perceptions of support. When partners perceived that they were receiving less support, male actors were less satisfied with their marriages, especially if their wives were high in anxiety. This suggests that anxious women who perceive less support from their male partners may undermine men's relationship satisfaction, either because they themselves are dissatisfied or because they engage in behaviors (such as clinging or making excessive demands for reassurance) that alienate their partners.

Satisfaction was also affected by partners' avoidance and perceptions of family demand. When partners perceived family demand to be high, actors who had more avoidant partners were less satisfied. When partners perceived less family demand, actors were more satisfied in general and avoidance was unrelated to satisfaction. This finding parallels the one above in that partners with unmet attachment-based needs have an adverse effect on the satisfaction of the actor with whom they are romantically involved. In other words, the consequences of one partner's unmet attachment needs are dyadic, affecting both partners. Highly avoidant partners may undermine actors' satisfaction through their own expressed dissatisfaction, perhaps because they fail to uphold their share of family responsibilities or they simply withdraw from their partners to establish greater autonomy and emotional independence.

Unexpected Findings

We hypothesized that the connection between avoidance and satisfaction would be moderated by family demand and work–family conflict, and that the link between anxiety and satisfaction would be moderated by perceived partner support and negative social exchange. We found evidence for these predictions. There was, however, one case in which avoidance interacted with perceptions of negative social exchange and anxiety interacted with work–family conflict. The avoidance finding involved a partner effect, which indicated that when wives perceived their husbands as behaving more negatively toward them, husbands were less satisfied when their wives were less avoidant (more secure), compared with men with more avoidant wives. It is unclear why women's lower avoidance should be related to less satisfaction. When female partners' perceptions of negative behavior were low, men were less happy when their partner was more avoidant. This unexpected finding is inconsistent with other results in the study, and it needs to be replicated.

The other unexpected finding was an actor effect indicating that men declined in satisfaction more sharply than women, but only when they were higher in attachment anxiety and perceived higher levels of work–family conflict. It is unclear why this sharp decline should be confined to men or what processes may explain it. One possibility is that work–family conflict makes it difficult for highly anxious men—who crave closeness—to be as deeply involved in their relationships as they would like. While avoidant individuals may feel their family interferes with their work, anxious individuals may feel their work interferes with their family. For anxious men, work–family conflict restricts their involvement in the family, driving down satisfaction.

Limitations and Conclusions

This study has three notable limitations. First, the data are all self-reported and correlational. Second, this sample has limited diversity. Participants were fairly well educated and only modestly diverse in terms of their ethnicity. They were also recruited from childbirth preparation classes (a common recruitment method for research on early parenthood), possibly indicating that many participants were very committed to their partners and families. If so, our couples may be more resilient across the transition than other samples. Third, the study did not include a control group of childless couples. Consequently, the declines in satisfaction reported and the attachment-related processes discussed cannot be established as occurring only during the transition to parenthood.

Despite these limitations, this study contributes several key findings to the literature on marital satisfaction across the transition to parenthood. First, it suggests that declines in marital satisfaction occur primarily in the presence of multiple risk factors. Second, this study confirms that attachment insecurities are a clear risk factor for declining satisfaction,

particularly in situations that clash with individuals' attachment-related needs and goals (e.g., needs for greater felt security with the partner, needs for greater independence/autonomy). Finally, this research shows that, under certain circumstances, relatively low levels of satisfaction are present at least 2 years following childbirth. For insecurely attached individuals, the transition to parenthood may be a critical period that can make or break marital satisfaction and, eventually, some marriages. Once set into motion, these negative patterns may cause severe and lasting damage to marital functioning.

Acknowledgments

Many thanks to Deborah Kashy for her guidance with the growth curve models. Thanks also to Alyxandria Barry for her enthusiasm and efforts in preparing figures and organizing the data analysis materials.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by National Institute of Mental Health Grant MH49599 to Jeffrey A. Simpson and W. Steven Rholes.

Notes

1. We tested whether participants who completed the study differed from those who did not. Participants were considered dropouts if they did not complete the last assessment wave (Time 5), regardless of when they discontinued. Independent-samples *t* tests were conducted on the Time 1 variables. Dropouts reported significantly more negative exchange than did participants who completed the study. Before childbirth, dropouts were also married/involved for less time, and they were younger, less educated, and reported lower household incomes. These significant differences are also reported in Table 3 of Rholes et al. (2011). Importantly, the groups did not differ on marital satisfaction, $t(134) = 1.62$, $p = .11$; attachment anxiety, $t(384) = 0.80$, $p = .42$; or attachment avoidance, $t(384) = 1.03$, $p = .30$.
2. One advantage of growth curve modeling is that analyses are conducted using all available information. That is, the models use all responses for relationship satisfaction assessed at each assessment wave, including couples that did not complete the study. Thus, growth curve modeling may counteract some biases associated with missing data.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. London, England: SAGE.
- Beach, S. R. H., Katz, J., Kim, S., & Brody, G. H. (2003). Prospective effects of marital satisfaction on depressive symptoms in established

- marriages: A dyadic model. *Journal of Social and Personal Relationships*, 20, 355-371. doi:10.1177/0265407503020003005
- Berant, E., Mikulincer, M., & Florian, V. (2001). The association of mothers' attachment style and their psychological reactions to the diagnosis of infant's congenital heart disease. *Journal of Social & Clinical Psychology*, 20, 208-232. doi:10.1521/jscp.20.2.208.22264
- Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation, anxiety, and anger*. New York, NY: Basic Books.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. London, England: Tavistock.
- Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). New York, NY: Basic Books.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46-76). New York, NY: Guilford.
- Campbell, L., Simpson, J. A., Boldry, J., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology*, 88, 510-531. doi:10.1037/0022-3514.88.3.510
- Cowan, C. P., & Cowan, P. A. (2000). *When partners become parents: The big life change for couples*. Mahwah, NJ: Lawrence Erlbaum.
- Cox, M. J., Paley, B., Burchinal, M., & Payne, C. C. (1999). Marital perceptions and interactions across the transition to parenthood. *Journal of Marriage and Family*, 61, 611-625.
- Davila, J., & Sargent, E. (2003). The meaning of life (events) predicts changes in attachment security. *Personality and Social Psychology Bulletin*, 29, 1383-1395. doi:10.1177/0146167203256374
- Doss, B. D., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2009). The effect of the transition to parenthood on relationship quality: An 8-year prospective study. *Journal of Personality and Social Psychology*, 96, 601-619. doi:10.1037/a0013969
- Feeney, J. A. (2004). Hurt feelings in couple relationships: Toward integrative models of the negative effects of hurtful events. *Journal of Social and Personal Relationships*, 21, 487-508. doi:10.1177/0265407504044844
- Feeney, J. A. (2008). Adult romantic attachment: Developments in the study of couple relationships. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (2nd ed., pp. 456-481). New York, NY: Guilford.
- Feeney, J. A., Hohaus, L., Noller, P., & Alexander, R. (2001). *Becoming parents: Exploring the bonds between mothers, fathers, and their infants*. Cambridge, UK: Cambridge University Press.
- Feeney, J. A., & Noller, P. (1992). Attachment style and romantic love: Relationship dissolution. *Australian Journal of Psychology*, 44, 69-74. doi:10.1080/00049539208260145
- Finch, J. F., Okun, M. A., Pool, G. J., & Ruehlman, L. S. (1999). A comparison of the influence of conflictual and supportive social interactions on psychological distress. *Journal of Personality*, 67, 581-622. doi:10.1111/1467-6494.00066
- Gillath, O., Selcuk, E., & Shaver, P. R. (2008). Moving toward a secure attachment style: Can repeated security priming help? *Social and Personality Psychology Compass*, 2, 1651-1666. doi:10.1111/j.1751-9004.2008.00120.x
- Grote, N. K., & Clark, M. S. (2001). Perceiving unfairness in the family: Cause or consequence of marital distress? *Journal of Personality and Social Psychology*, 80, 281-293. doi:10.1037/0022-3514.80.2.281
- Hammond, J. R., & Fletcher, G. J. O. (1991). Attachment styles and relationship satisfaction in the development of close relationships. *New Zealand Journal of Psychology*, 20, 56-62.
- Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, 59, 270-280.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, method, and research. *Psychological Bulletin*, 118, 3-34.
- Kashy, D. A., & Donnellan, M. B. (2008). Comparing MLM and SEM approaches to analyzing developmental dyadic data: Growth curve models of hostility in families. In N. A. Card, J. P. Selig, & T. D. Little (Eds.), *Modeling dyadic and interdependent data in the developmental and behavioral sciences* (pp. 165-190). New York, NY: Routledge.
- Kashy, D. A., & Kenny, D. A. (2000). The analysis of data from dyads and groups. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 451-477). New York, NY: Cambridge University Press.
- Kenny, D. A. (1996). Models of non-independence in dyadic research. *Journal of Social and Personal Relationships*, 13, 279-294. doi:10.1177/0265407596132007
- Lawrence, E., Nylen, K., & Cobb, R. J. (2007). Prenatal expectations and marital satisfaction over the transition to parenthood. *Journal of Family Psychology*, 21, 155-164. doi:10.1037/0893-3200.21.2.155
- Lawrence, E., Rothman, A. D., Cobb, R. J., Rothman, M. T., & Bradbury, T. N. (2008). Marital satisfaction across the transition to parenthood. *Journal of Family Psychology*, 22, 41-50. doi:10.1037/0893-3200.22.1.41
- McGonagle, K. A., Kessler, R. C., & Schilling, E. A. (1992). The frequency and determinants of marital disagreements in a community sample. *Journal of Social and Personal Relationships*, 9, 507-524.
- Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology*, 74, 1209-1224.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York, NY: Guilford.
- Mikulincer, M., & Sheffi, E. (2000). Adult attachment style and cognitive reactions to positive affect: A test of mental categorization and creative problem solving. *Motivation and Emotion*, 24, 149-174.
- Mitnick, D. M., Heyman, R. E., & Slep, A. M. S. (2009). Changes in relationship satisfaction across the transition to parenthood: A meta-analysis. *Journal of Family Psychology*, 23, 848-852. doi:10.1037/a0017004
- Oakley, A. (1980). *Women confined: Toward a sociology of childbirth*. New York, NY: Schocken Books.

- Overall, N. C., & Sibley, C. G. (2009). Attachment and dependence regulation within daily interactions with romantic partners. *Personal Relationships, 16*, 239-261. doi:10.1111/j.1475-6811.2009.01221.x
- Owen, M. T., & Cox, M. J. (1997). Marital conflict and the development of infant-parent attachment relationships. *Journal of Family Psychology, 11*, 152-164. doi:10.1037/0893-3200.11.2.152
- Paley, B., Cox, M. J., Kanoy, K. W., Harter, K. S. M., Burchinal, M., & Margand, N. A. (2005). Adult attachment and marital interaction and predictors of whole family interactions during the transition to parenthood. *Journal of Family Psychology, 19*, 420-429. doi:10.1037/0893-3200.19.3.420
- Rholes, W. S., Simpson, J. A., & Blakely, B. S. (1995). Adult attachment styles and mothers' relationships with their young children. *Personal Relationships, 2*, 35-54. doi:10.1111/j.1475-6811.1995.tb00076.x
- Rholes, W. S., Simpson, J. A., Blakely, B. S., Lanigan, L., & Allen, E. A. (1997). Adult attachment styles, the desire to have children, and working models of parenthood. *Journal of Personality, 65*, 357-385. doi:10.1111/j.1467-6494.1997.tb00958.x
- Rholes, W. S., Simpson, J. A., Campbell, L., & Grich, J. (2001). Adult attachment and the transition to parenthood. *Journal of Personality and Social Psychology, 81*, 421-435. doi:10.1037//0022-3514.81.3.421
- Rholes, W. S., Simpson, J. A., & Friedman, M. (2006). Avoidant attachment and the experience of parenting. *Personality and Social Psychology Bulletin, 32*, 275-285. doi:10.1177/0146167205280910
- Rholes, W. S., Simpson, J. A., Kohn, J. L., Wilson, C. L., Martin, A. M., III, Tran, S., & Kashy, D. A. (2011). Attachment orientations and depression: A longitudinal study of new parents. *Journal of Personality and Social Psychology, 100*, 567-586. doi:10.1037/a0022802
- Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology, 44*, 127-139. doi:10.1037/0022-3514.44.1.127
- Schumm, W. R., Webb, F. J., & Bollman, S. R. (1998). Gender and marital satisfaction data from the National Survey of Families and Households. *Psychological Reports, 83*, 319-327.
- Shapiro, A. F., Gottman, J. M., & Carrère, S. (2000). The baby and the marriage: Identifying factors that buffer against decline in marital satisfaction after the first baby arrives. *Journal of Family Psychology, 14*, 59-70. doi:10.1037//0893-3200.14.1.59
- Shaver, P. R., & Mikulincer, M. (2002). Attachment-related psychodynamics. *Attachment & Human Development, 4*, 131-161.
- Simpson, J. A., Rholes, W. S., & Nelligan, J. S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology, 62*, 434-446.
- Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology, 71*, 899-914.
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and Family, 38*, 15-28.
- Sümer, N., & Cozzarelli, C. (2004). The impact of adult attachment on partner and self-attributions and relationship quality. *Personal Relationships, 11*, 355-371. doi:10.1111/j.1475-6811.2004.00087.x
- Treboux, D., Crowell, J. A., & Waters, E. (2004). When "new" meets "old": Configurations of adult attachment representations and their implications for marital functioning. *Developmental Psychology, 40*, 295-314. doi:10.1037/0012-1649.40.2.295
- Whisman, M. A. (2007). Marital distress and DSM-IV psychiatric disorders in a population-based national survey. *Journal of Abnormal Psychology, 116*, 638-643. doi:10.1037/0021-843X.116.3.638
- Yang, N., Chen, C. C., Choi, J., & Zou, Y. (2000). Sources of work-family conflict: A Sino-U.S. comparison of the effects of work and family demands. *Academy of Management Journal, 43*, 113-123.