Neuroticism and Marital Satisfaction: The Mediating Role Played by the Sexual Relationship

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Why is Neuroticism so harmful to marriage and other intimate relationships? Given that such relationships generally involve a sexual component, the current longitudinal study explored whether the apparent negative impact of own and partner’s Neuroticism on marriage could be explained by dissatisfaction with the sexual relationship. Just after their weddings, 72 couples reported their marital satisfaction, sexual satisfaction, and Neuroticism. One year later, they again reported their marital and sexual satisfaction. Own Neuroticism predicted lower levels of concurrent marital and sexual satisfaction among husbands and wives, declines in sexual satisfaction among husbands and wives, and declines in marital satisfaction among wives. Partner’s Neuroticism predicted lower levels of concurrent marital satisfaction among husbands and wives, lower levels of concurrent sexual satisfaction among husbands, and declines in sexual satisfaction among husbands. Consistent with predictions, sexual satisfaction mediated every effect of own and partner Neuroticism on marital satisfaction. Results highlight the prominent role played by the sexual relationship in accounting for marital outcomes and thus suggest specific processes through which Neuroticism may affect the marriage.

Keywords: marital satisfaction, sexual satisfaction, Neuroticism, Big Five personality traits, longitudinal

Although most people who marry dream of living happily ever after, various personality traits appear to predispose some to an ending far less romantic. Specifically, emerging evidence has indicated that certain traits can lead partners to be at higher risk for experiencing distress and instability in their intimate relationships (McGue & Lykken, 1992; Robins, Caspi, & Moffitt, 2002; Russell & Wells, 1994; Spotts et al., 2005). Russell and Wells (1994), for instance, accounted for over 60% of the variance in marital quality by means of the personality traits of the two spouses. Likewise, Jockin, McGue, and Lykken (1996) suggested that personality in married individuals might explain as much as 25% of the variance in divorce risk. In their words, “in light of the myriad of social, economic, and psychological factors that bear on the probability of a life outcome such as divorce, such a contribution to variance seems considerable” (p. 296).

Empirical evidence has pointed to Neuroticism as the personality trait that plays the most significant role in marital outcomes (for a review, see Karney & Bradbury, 1995), as spouses, and the partners of spouses, who are higher in Neuroticism appear to be less satisfied with their relationships. Yet, our understanding of the mechanism through which Neuroticism has such robust negative effects remains limited (e.g., Karney & Bradbury, 1997). Given the important role of the sexual relationship in marriage (for a review, see Sprecher & Cate, 2004) and given observed associations between Neuroticism and sexual satisfaction (e.g., Goldberg, Pyszczynski, McCoy, Greenberg, & Solomon, 1999), the current study investigated whether the sexual relationship mediated the effects of (a) own Neuroticism on marital satisfaction, (b) the partner’s Neuroticism on marital satisfaction, and (c) own and partner’s Neuroticism on changes in marital satisfaction over time.

Own Neuroticism

According to Costa and McCrae (1992), “neuroticism is a general tendency to experience negative affects,” and people high in Neuroticism are “prone to have irrational ideas, be less able to control their impulses, and to cope more poorly than others with stress” (p. 14). Thus, it is not surprising that when Karney and Bradbury (1995) reviewed the literature on personality and marriage, they concluded that Neuroticism was the trait most strongly associated with
negative marital outcomes. In fact, two theoretical perspectives can explain this link. First, interpersonal models (e.g., Cote & Moskowitz, 1998; Terman, Buttenwieser, Ferguson, Johnson, & Wilson, 1938) suggest that those higher in Neuroticism should be less satisfied with their relationships because they tend to create negative life events through negative behavior and emotional contagion. Second, intrapersonal models (e.g., Coté & Moskowitz, 1998; Terman, Buttenwieser, Ferguson, Johnson, & Wilson, 1938) suggest that those higher in Neuroticism are less satisfied with their relationships because they are less satisfied with their lives generally, possibly because they perceive life events more negatively.

Though both perspectives suggest that Neuroticism affects marriage through perceptual or behavioral processes, attempts to uncover such processes have been unsuccessful. For example, Karney and Bradbury (1997) found no evidence that the observed nature of couples’ communication behaviors accounts for the effects of Neuroticism on marriage. Given that few effects of Neuroticism have been found in nonromantic relationships (Neyer & Asendorpf, 2001), the effects of Neuroticism on marriage may be facilitated by interpersonal processes unique to intimate relationships. One such process is the sexual relationship. Indeed, studies have demonstrated a rather robust positive association between sexual satisfaction and relationship satisfaction (e.g., Byers, 2005; Christopher & Sprecher, 2000; for a review, see Sprecher & Cate, 2004). Perhaps the strong association between Neuroticism and marital outcomes is due, at least in part, to the nature of the sexual relationship.

There are several reasons to expect sexual satisfaction to account for part of the association between Neuroticism and marital satisfaction. First, from a more interpersonal perspective, to the extent that the enjoyment of sexuality requires agency and/or communion (Hendrick & Hendrick, 1987), a high level of Neuroticism should be associated with less sexual enjoyment because Neuroticism involves components of neither (Wiggins & Trapnell, 1996). Second, from a more intrapersonal perspective, given that personality impacts the ways in which people interpret their experiences (e.g., Cervone, 2004; Tamir & Robinson, 2004) and given that cognitions influence sexual experiences (e.g., Geer & Manguno-Mire, 1996), Neuroticism may also impact the enjoyment and valuing of sexual interactions through negative cognitions. Indeed, several empirical studies have established a link between Neuroticism and sexual satisfaction (Costa, Fagan, Piedmont, Ponticas, & Wise, 1992; Goldenberg et al., 1999; Heaven, Fitzpatrick, Craig, Kelly, & Sebar, 2000; Schenk & Prang, 1986). Nevertheless, possibly due to the nature of the specific samples studied, the effects of Neuroticism on sexual satisfaction have been somewhat mixed with respect to gender. For example, using a sample of college students, Heaven et al. (2000) found that higher Neuroticism predicted lower sexual satisfaction in women but higher sexual satisfaction in men. However, using a sample of clients from a sex therapy clinic, Costa et al. (1992) found higher Neuroticism predicted lower sexual satisfaction in men but not women.

The first goal of the current study was twofold. First, we sought to help clarify the link between Neuroticism and sexual satisfaction by examining the effects of Neuroticism on sexual satisfaction with a sample of married couples drawn from the community at large. Second, given the potential that Neuroticism may operate on marital satisfaction through its effects on the sexual relationship, we sought to examine whether sexual satisfaction mediated the effects of Neuroticism on marital satisfaction.

**Partner Neuroticism**

Recent theoretical perspectives suggest that levels of the partner’s Neuroticism also should be related to marital satisfaction. Specifically, discussing personality in terms of the Lewinian (1935) equation that behavior is determined jointly by characteristics of the person and the environment, Shoda and colleagues (Shoda, Tiernan, & Mischel, 2002; Zayas, Shoda, & Ayduk, 2002) proposed a cognitive-affective processing system whereby one’s partner’s personality is conceptualized as the “environment” that interacts with one’s own personality to determine interpersonal behavior. Consistent with this model, numerous studies have indicated that partners’ Neuroticism negatively predicts spouses’ marital satisfaction (Botwin, Buss, & Shackelford, 1997; Bouchard, Lussier, & Sabourin 1999; Geist & Gilbert, 1996; Karney & Bradbury, 1997; Kurdek, 1997; Lavee & Ben-Ari, 2004; Robins, Caspi, & Moffitt, 2000; Russell & Wells, 1994). Perhaps the effect of the partner’s Neuroticism on marital satisfaction also operates through sexual satisfaction. That is, perhaps Neuroticism in the partner leads to a less satisfying sexual relationship, which leads to lower levels of satisfaction with the marriage.

The potential role of sexual satisfaction in mediating the effect of partner’s Neuroticism on marital satisfaction remains unknown for two reasons, however. First, studies demonstrating an association between Neuroticism and sexual satisfaction did not explore the link between the partner’s Neuroticism and sexual satisfaction, largely because these studies did not examine both members of the couple. Second, though the link between partners’ Neuroticism and marital satisfaction has been demonstrated across numerous studies, certain aspects of this association remain unclear. Whereas some studies have indicated that Neuroticism in either partner negatively impacts the marital quality for the spouse (Botwin, Buss, & Shackelford, 1997; Bouchard, Lussier, & Sabourin, 1999; Kurdek, 1997; Robins, Caspi, & Moffitt, 2000; Russell & Wells, 1994), some studies have indicated that only husband’s Neuroticism influences the spouse’s marital adjustment (e.g., Lavee & Ben-Ari, 2004), and other studies have indicated that only wife’s Neuroticism influences the spouse (e.g., Geist & Gilbert, 1996; Karney & Bradbury, 1997).

The second goal of the current study also was twofold. First, we sought to help clarify the role of partner’s Neuroticism on marital and sexual satisfaction. Second, we sought to examine whether spouse’s sexual satisfaction mediates the effects of the partner’s Neuroticism on spouse’s marital satisfaction.
Neuroticism and Changes in Marital and Sexual Satisfaction Over Time

Finally, in addition to suggesting that the partner’s Neuroticism should affect the marriage, the cognitive–affective processing system model described above suggests that the effects of own and partner’s Neuroticism on marital outcomes should change over time. Specifically, Zayas et al. (2002) described the environment of a relationship as “itself a living thing – something that is continuously changing, personal, active, and reactive” (p. 861). Accordingly, though Neuroticism itself should remain relatively stable over time (Caspi, Bem, & Elder, 1989; McCrae & Costa, 1994), given that the effects of Neuroticism should be determined in part by the context of the relationship, as the context of the relationship changes over time, the effects of Neuroticism may change as well.

Yet, the effects of own and partner Neuroticism on changes in marital and sexual satisfaction remain unclear. With respect to the effects of Neuroticism on changes in marital satisfaction, studies have yielded inconsistent findings thus far. Specifically, whereas Kelly and Conley (1987) demonstrated that high Neuroticism prior to marriage was strongly predictive of marital dissatisfaction and divorce over 45 years, Karney and Bradbury (1997) failed to find evidence that Neuroticism actually leads to changes in marital satisfaction as measured at eight different time points over 4 years. With respect to the effects of Neuroticism on changes in sexual satisfaction, we are aware of no studies that have examined such links.

The final goal of the current study was also twofold. First, we sought to help clarify the role of Neuroticism in predicting changes in marital and sexual satisfaction over time. Second, we sought to examine whether changes in sexual satisfaction mediate any observed effects of own and partner’s Neuroticism on changes in marital satisfaction over time.

Overview of the Current Study

The current study attempted to clarify the effects of own and partner’s Neuroticism on concurrent levels of and changes in marital satisfaction as well as to examine whether these associations are due, at least in part, to Neuroticism’s effect on sexual satisfaction. To this end, a sample of newlyweds reported their satisfaction with their marriages, their satisfaction with their sexual relationships, and the extent to which statements on a measure of Neuroticism described them. Approximately 1 year later, both spouses again reported their sexual and marital satisfaction.

Newlyweds are an ideal sample in which to investigate these issues. Marital adjustment in the newlywed years is strongly predictive of subsequent marital happiness and stability (Huston, Caughlin, Houts, Smith, & George, 2001). In addition, the early years of marriage are a period of dramatic change for couples, both generally (Bramlett & Mosher, 2002; Cherlin, 1992) and sexually (e.g., James, 1981; Klusmann, 2002, 2005; Liu, 2003). Thus, we examined change during a period when such change is both meaningful and likely.

Hypotheses

On the basis of the empirical and theoretical work reviewed previously, we expected own and partner’s Neuroticism to predict lower levels of marital and sexual satisfaction, both concurrently and longitudinally. Further, given the importance of the sexual relationship to the marital relationship, we predicted sexual satisfaction to mediate the effects of Neuroticism on marital satisfaction.

Method

Participants

The current sample consists of 72 couples in their first marriage assessed within months \( (M = 3.2, SD = 1.6) \) after their wedding.\(^1\) Participants were recruited from a north-central Ohio community with two methods. The first was to place advertisements in community newspapers and bridal shops, offering up to $410 to couples willing to participate in the study. The second was to send letters regarding the details of the study to eligible couples who had recently completed marriage license applications in several nearby counties. Couples responding to either solicitation were screened in a telephone interview to determine whether they met the following criteria: (a) both partners were in their first marriage, (b) the couple had been married less than 6 months, (c) each partner was at least 18 years of age, (d) each partner spoke English and had completed at least 10 years of education (to ensure comprehension of the questionnaires), and (e) the couple had no immediate plans to move away from the area. Interested and eligible couples were scheduled for a 3-hour laboratory session.

On average, husbands were 24.9 years old \( (SD = 4.4) \) and had completed 14.2 years \( (SD = 2.5) \) of education. Seventy-four percent were employed full time, and 11% were full time students. Wives averaged 23.5 years \( (SD = 3.8) \) of age and had completed 14.7 years \( (SD = 2.2) \) of education. Forty-nine percent were employed full time, and 26% were full time students. The average combined income of couples was less than $35,000 per year. Reporting of race and religion was optional; the great majority of those who reported this information were Caucasian and Christian.

Procedure

As part of a broader study of marital development, couples were mailed a packet of questionnaires to complete at home and bring to their laboratory sessions. This packet included a consent form approved by the Institutional Review Board of The Ohio State University, self-report measures of marital satisfaction, sexual satisfaction, and Neuroticism, and a letter instructing couples to complete all questionnaires independently of one another. At their session, each spouse was provided with seven stamped and

\(^1\) Other findings from these same couples may be found in Frye, McNulty, and Karney (in press) as well as McNulty (in press) and McNulty and Fisher (in press).
addressed envelopes. Each envelope contained a one-page questionnaire (which we also call a diary) that included items designed to assess how satisfied spouses were on a given day with numerous specific domains of the relationship. Couples were instructed to complete 1 questionnaire per night for the next 7 nights and to mail competed questionnaires the following morning. In addition to being paid $60 for participating in this baseline phase of the study, couples were offered $25 for completing all 14 diaries or $1.50 per diary if they failed to return all pages.

At approximately 6-month intervals subsequent to the initial assessment, couples were contacted by phone and then mailed another packet of questionnaires, including measures of marital and sexual satisfaction, a letter of instruction reminding couples to complete forms independently of one another, and a postage-paid return envelope. Couples were paid $40 for participating in this additional phase of the study. Though data on sexual and marital satisfaction were available from the 6-month wave of data collection, data from the 1-year follow-up were used in the current analyses, as they provided the opportunity to account for more substantial changes in marital and sexual satisfaction.\(^2\)

**Materials**

Sexual satisfaction. Sexual satisfaction was assessed with the Index of Sexual Satisfaction (Hudson, 1998). The Index of Sexual Satisfaction asks spouses to respond to 25 statements describing the quality of their sexual relations with their partner on a scale from 1 (none of the time) to 7 (all of the time). Responses were reverse scored when appropriate and summed to form an index of sexual satisfaction that ranged from 25 to 175, with higher scores indicating higher levels of satisfaction. Internal consistency of this measure was high in the current sample (coefficient alpha was .92 for husbands and .93 for wives).

Marital satisfaction. To ensure that our measure of relationship satisfaction was not confounded with specific relationship issues (e.g., sexual satisfaction; Fincham & Bradbury, 1987), participants reported their global relationship satisfaction by using a version of the Semantic Differential (Osgood, Suci, & Tannenbaum, 1957). The Semantic Differential asks spouses to rate their perceptions of their relationship on 7-point scales between 15 pairs of opposing adjectives (e.g., Bad–Good, Dissatisfied–Satisfied, Unpleasant–Pleasant). The Semantic Differential yields scores from 15 to 105, with higher scores reflecting greater satisfaction with the relationship. In the current sample, internal consistency of this measure was high (coefficient alpha was .94 for husbands and .92 for wives).

Neuroticism. In order to measure participants’ Neuroticism, we used the Neuroticism subscale of the Big Five Personality Inventory (Goldberg, 1999). This instrument consists of 10 statements with which the participant indicates extent of agreement on a scale ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating a greater degree of Neuroticism. Internal consistency was high (coefficient alpha was .90 for husbands and .88 for wives).

**Satisfaction with various specific relationship domains.** Given our prediction that spouses’ evaluations of their sexual relationships would be a unique mediator of the effects of Neuroticism on marital satisfaction, we wanted to demonstrate the extent to which spouses’ sexual satisfaction mediated the effects of Neuroticism, independent of their evaluations of other specific domains of the relationships. The daily diary provided an opportunity to control for spouses’ evaluations of other specific domains of the marriage. Each night for 7 nights, participants reported their satisfaction with the following other specific domains of the marriage: (a) partner’s physical appearance, (b) partner’s social skills, (c) partner’s contribution to household chores, (d) partner’s support, (e) partner’s intellect, (f) interactions with their partner, (g) time spent with their partner, and (h) resolution of disagreements. Participants responded to each item on a 7-point Likert-type scale ranging from 1 (very unsatisfied) to 7 (very satisfied). Their reports across the 7 days were summed to form an index of spouses’ average levels of satisfaction with each domain, where higher scores indicated greater levels of satisfaction.

**Analysis Strategy**

Analyzing data from couples presents unique challenges. Because husbands and wives share similar experiences in their relationships, experiences not shared by other members of the sample, their data violate statistical assumptions of independence. Thus, Raudenbush and colleagues (Barnett, Marshall, Raudenbush, & Brennan, 1993; Raudenbush, Brennan, & Barnett, 1995) have recommended estimating the effects of husbands and wives separately but simultaneously in the first level of a multilevel model with two intercepts, one for husbands and one for wives. We followed such recommendations here, testing all hypotheses by using hierarchical linear modeling (Bryk & Raudenbush, 2002).

**Results**

**Data Profile, Descriptive Statistics, and Preliminary Analyses**

Two husbands were excluded from analyses involving initial marital satisfaction because of missing data. One-year follow-up marital satisfaction data were obtained from 90% of wives and 89% of husbands, and follow-up sexual satisfaction data were obtained from 83% of wives and 78% of husbands. However, for some of the Time 2 analyses,\(^2\) Ten couples indicated that they had lived together prior to marriage. Analyses examined whether couples who lived together before marriage versus those who did not live together before marriage differed in terms of the variables examined in the current analyses: Neuroticism, Time 1 or Time 2 marital satisfaction, Time 1 or Time 2 sexual satisfaction, and changes in sexual satisfaction and in marital satisfaction, controlling for initial starting point. No significant differences were found, and analyses controlling for cohabitation revealed effects that were virtually identical to those reported.

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Table 1
Descriptive Statistics for Marital and Sexual Satisfaction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Husband</th>
<th>Wife</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Marital satisfaction (Time 1)</td>
<td>98.1</td>
<td>13.3</td>
</tr>
<tr>
<td>Marital satisfaction (Time 2)</td>
<td>96.2</td>
<td>15.3</td>
</tr>
<tr>
<td>Change in marital satisfaction</td>
<td>-2.2</td>
<td>13.5</td>
</tr>
<tr>
<td>Sexual satisfaction (Time 1)</td>
<td>142.8</td>
<td>20.2</td>
</tr>
<tr>
<td>Sexual satisfaction (Time 2)</td>
<td>133.9</td>
<td>19.9</td>
</tr>
<tr>
<td>Change in sexual satisfaction</td>
<td>-10.8</td>
<td>19.0</td>
</tr>
</tbody>
</table>

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

data from only 74% of the couples could be used because certain analyses required data from both partners.

Table 1 shows the means, standard deviations, and ns of spouses’ Time 1 and Time 2 reports of marital satisfaction and sexual satisfaction, as well as the change scores and cross-spouse correlations for those variables. On average, wives experienced significant declines in marital satisfaction over the 1st year of marriage, as indicated by a paired-samples t test, \( t(64) = 2.8, p < .01 \); and both husbands and wives experienced significant declines in sexual satisfaction over the 1st year of marriage: for husbands, \( t(55) = 4.2, p < .001 \); for wives, \( t(59) = 3.5, p < .01 \). Although the mean changes are relatively small, an examination of the individual or difference scores indicates that some couples had experienced dramatic declines in marital (55% of both husbands and wives) and sexual (70% of husbands; 62% of wives) satisfaction, whereas others actually experienced increases in marital (39% of husbands and 34% of wives) and sexual (23% of husbands and 33% of wives) satisfaction. A paired-samples t test indicated that husbands and wives differed on Neuroticism, with wives (\( M = 30.2, SD = 7.6 \)) scoring higher than husbands (\( M = 23.7, SD = 8.3 \)), \( t(71) = 5.0, p < .001 \). Husbands’ and wives’ Neuroticism scores were not significantly correlated with one another, \( r(70) = .05, p < .50 \).

Primary Analyses

Does Neuroticism predict initial marital satisfaction? The first set of analyses examined the concurrent associations between Neuroticism and marital satisfaction at Time 1. Specifically, each partner’s Time 1 marital satisfaction was regressed onto his or her own and his or her partner’s Neuroticism in the first level of a multilevel model with the following equation:

\[
Y = \beta_1 (\text{dummy code for husbands}) + \beta_2 (\text{dummy code for wives}) + \beta_3 (\text{husbands’ Neuroticism}) + \beta_4 (\text{wives’ Neuroticism}) + \beta_5 (\text{husbands’ partners’ Neuroticism}) + \beta_6 (\text{wives’ partners’ Neuroticism}) + e
\]  

(1)

where \( Y \) is the marital satisfaction; \( \beta_1 \) estimates husbands’ intercept; \( \beta_2 \) estimates wives’ intercept; \( \beta_3 \) captures the association between husbands’ Neuroticism and husbands’ satisfaction; \( \beta_4 \) captures the association between wives’ Neuroticism and wives’ satisfaction; \( \beta_5 \) captures the association between wives’ Neuroticism and husbands’ satisfaction; \( \beta_6 \) captures the association between husbands’ Neuroticism and wives’ Neuroticism and wives’ satisfaction; \( \beta_5 \) captures the association between husbands’ Neuroticism and husbands’ satisfaction, and \( e \) is the residual variance in repeated measurements for the individual, assumed to be independent and normally distributed across individuals. Because these Level-1 effects were based on only two observations from each couple, husbands’ reports and wives’ reports, they were all treated as fixed, and no random effects were estimated.

Results of this analysis are reported in the first column of Table 2. As can be seen, both own and partner’s Neuroticism were significant independent negative predictors of marital satisfaction for both husbands and wives. That is, husbands and wives higher in Neuroticism were less satisfied with their marriages and, controlling for that, husbands and wives with partners who were higher in Neuroticism were less satisfied with their marriages. Subsequent tests comparing the fit of a model in which effects for husbands and wives were constrained to be equal with the fit of the model in which their effects were allowed to differ revealed no significant sex differences in the effect of own Neuroticism, \( \chi^2(1) = 1.45, p = .22 \); or partner’s Neuroticism, \( \chi^2(1) = 0.58, p > .5 \). Further, a similar test revealed no difference in the strength of the effects of own Neuroticism versus that of partner’s Neuroticism for either wives, \( \chi^2(1) = 0.00, p > .5 \); or husbands, \( \chi^2(1) = .11, p > .5 \).

Does Neuroticism predict initial sexual satisfaction? A second analysis was conducted to examine the concurrent associations between Neuroticism and sexual satisfaction at Time 1. Specifically, the same analysis was repeated but with Time 1 sexual satisfaction regressed onto own and partner’s Neuroticism. The results of this analysis are re-

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3 Ten couples indicated that they had lived together prior to marriage. Independent-samples t tests were used to ascertain if couples who lived together before marriage versus those who did not live together before marriage differed in terms of the variables examined in the current analyses: Neuroticism, Time 1 or Time 2 marital satisfaction, Time 1 or Time 2 sexual satisfaction, and changes in sexual satisfaction. The only significant difference between the two groups was that wives who cohabited prior to marriage experienced significantly less decline in sexual satisfaction over the 1st year of marriage, \( t = 3.17, p < .01 \). Further, analyses controlling for cohabitation revealed effects that were virtually identical to those reported.
reported in the second column of Table 2. For wives, own Neuroticism, but not husbands’ Neuroticism, significantly negatively predicted own sexual satisfaction. For husbands, both own and wives’ Neuroticism significantly negatively predicted sexual satisfaction. That is, husbands and wives higher in Neuroticism were less satisfied with their sexual relationships and, controlling for that, husbands with wives who were higher in Neuroticism were less satisfied with their sexual relationships. Further, despite the fact that the association between husbands’ Neuroticism and wives’ sexual satisfaction did not reach significance, subsequent tests revealed no significant sex differences in the effect of own Neuroticism, $\chi^2(1) = 0.17, p > .5$; or partner’s Neuroticism, $\chi^2(1) = 0.95, p > .5$; and no significant differences in the strength of the effects of own Neuroticism versus effects of partner’s Neuroticism for wives, $\chi^2(1) = 2.43, p > .12$; or husbands, $\chi^2(1) = 1.40, p = .23$.

**Does Neuroticism predict initial marital satisfaction, controlling for sexual satisfaction?** Given the significant association between both spouses’ Neuroticism and their sexual satisfaction, and given the strong association between marital and sexual satisfaction: in the current sample, husbands $r(68) = .52, p < .001$, and wives $r(70) = .54, p < .001$; a third analysis was conducted to determine whether sexual satisfaction accounted for the associations revealed between Neuroticism and marital satisfaction. Specifically, the analyses describing each spouse’s initial marital satisfaction, as illustrated in Equation 1, were repeated, except that each partner’s own sexual satisfaction was entered as a control. That is, each spouse’s initial marital satisfaction was regressed onto their own Neuroticism, their partner’s Neuroticism, and their own initial sexual satisfaction. Results are presented in the third column of Table 2. For husbands, own Neuroticism and wives’ Neuroticism remained significant negative predictors of their marital satisfaction after controlling own sexual satisfaction. Yet, as reported in the final column of Table 2, Sobel tests (Sobel, 1982) using the $z'$ statistic recommended by MacKinnon, Lockwood, Hoffman, West, and Sheets (2002; where the critical value of $z' = 0.97$) revealed that husbands’ sexual satisfaction significantly mediated the association between husbands’ Neuroticism and husbands’ marital satisfaction ($z' = -2.56, p < .01$) and the association between wives’ Neuroticism and husbands’ marital satisfaction ($z' = -1.96, p < .01$). For wives, once own sexual satisfaction was controlled, husbands’ Neuroticism remained marginally negatively predictive of wives’ marital satisfaction, but own Neuroticism no longer significantly predicted own marital satisfaction. Further, Sobel tests (Sobel, 1982) indicated that wives’ sexual satisfaction significantly mediated the association between husbands’ Neuroticism and wives’ marital satisfaction ($z' = -1.17, p < .05$) and fully mediated the association between own Neuroticism and marital satisfaction ($z' = -2.29, p < .01$). Subsequent tests revealed no significant sex differences in the effect of own Neuroticism, $\chi^2(1) = 1.86, p = .17$; or partner’s Neuroticism, $\chi^2(1) = 0.23, p > .5$; and no significant differences in the strength of the effects of own Neuroticism versus that of partner’s Neuroticism for wives, $\chi^2(1) = 0.71, p > .5$; or husbands, $\chi^2(1) = 0.00, p > .5$.

**Does Neuroticism predict changes in marital satisfaction?** Another analysis was conducted to estimate the extent to which own Neuroticism accounted for changes in marital satisfaction over the 1st year of the marriage. Specifically, each partner’s Time 2 marital satisfaction was regressed onto his or her own and his or her partner’s Neuroticism in the first level of a multilevel model with the following equation:

$$Y = \beta_1 \text{ (dummy code for husbands)} + \beta_2 \text{ (dummy code for wives)} + \beta_3 \text{ (husbands’ Time 1 satisfaction)} + \beta_4 \text{ (wives’ Time 1 satisfaction)} + \beta_5 \text{ (husbands’ Neuroticism)}$$

\[ Y = \begin{cases} \beta_1 & \text{if husband} \\ \beta_2 & \text{if wife} \end{cases} + \beta_3 \text{ (husbands’ Time 1 satisfaction)} + \beta_4 \text{ (wives’ Time 1 satisfaction)} + \beta_5 \text{ (husbands’ Neuroticism)} \]
Thus, these analyses examined the extent to which own Neuroticism and partners’ Neuroticism accounted for residualized change in marital satisfaction. Results are reported in the first column of Table 3. As can be seen, for wives, own Neuroticism, but not husbands’ Neuroticism, negatively predicted declines in marital satisfaction over the 1st year of marriage. That is, to the extent that wives were higher in Neuroticism at the beginning of the marriage, they became less satisfied with marriage over the 1st year, controlling for the association between Neuroticism and initial marital satisfaction. For husbands, neither own nor wives’ Neuroticism predicted changes in marital satisfaction. Nevertheless, subsequent tests revealed no significant sex differences in the effect of own Neuroticism, $\chi^2(1) = 0.42, p = .5$; or partner’s Neuroticism, $\chi^2(1) = 0.97, p > .5$; and no significant differences in the strength of the effects of own Neuroticism versus that of partner’s Neuroticism for either wives, $\chi^2(1) = 0.52, p > .5$; or husbands, $\chi^2(1) = 1.40, p = .23$.

Does Neuroticism predict changes in sexual satisfaction? Another analysis was conducted to examine the extent to which own Neuroticism accounted for changes in sexual satisfaction over the 1st year of the marriage. Specifically, the same analyses describing changes in marital satisfaction were repeated, except that Time 2 sexual satisfaction was regressed onto Time 1 sexual satisfaction, own Neuroticism, and partner’s Neuroticism. Thus, these analyses estimate the extent to which own Neuroticism and partner’s Neuroticism independently accounted for residualized change in own sexual satisfaction. The results of this analysis are reported in the second column of Table 3. As can be seen, for wives, own Neuroticism, but not husbands’ Neuroticism, predicted declines in sexual satisfaction over the 1st year of marriage. For husbands, own Neuroticism as well as wives’ Neuroticism predicted declines in sexual satisfaction over the 1st year of marriage. That is, to the extent that husbands and wives were higher in Neuroticism at the beginning of the marriage, they became less satisfied with their sexual relationship over the 1st year, and, controlling for that, to the extent that wives were higher in Neuroticism at the beginning of the marriage, husbands became less satisfied with their sexual relationships over the 1st year of the marriage. Subsequent tests revealed no significant sex differences in the effect of own Neuroticism, $\chi^2(1) = 0.30, p > .5$; or partner’s Neuroticism, $\chi^2(1) = 2.64, p = .10$; and no significant differences in the strength of the effects of own Neuroticism versus that of partner’s Neuroticism for husbands, $\chi^2(1) = 0.07, p > .5$. However, for wives, own Neuroticism was a stronger predictor of declines in own sexual satisfaction than was their husbands’ Neuroticism, $\chi^2(1) = 7.03, p < .01$.

Does Neuroticism predict changes in marital satisfaction, controlling for changes in sexual satisfaction? Given the effects of Neuroticism on changes in sexual satisfaction, and given the strong association between changes in own marital and sexual satisfaction: in the current sample, husbands $r(53) = .43, p < .01$, and wives $r(70) = .55, p < .001$; another analysis was conducted to determine whether changes in sexual satisfaction accounted for the associations revealed between Neuroticism and changes in marital satisfaction. Specifically, the analyses describing each spouse’s changes in marital satisfaction, as illustrated in Equation 2, were repeated, except that each spouse’s changes in own sexual satisfaction as well as each spouse’s own initial sexual satisfaction were entered as controls. That is, each spouse’s Time 2 marital satisfaction was regressed onto his or her Time 1 marital satisfaction, his or her own Neuroticism, his or her partner’s Neuroticism, his or her partner’s Neuroticism predicted changes in marital satisfaction controlling for changes in sexual satisfaction, $df = 103$.

### Table 3

**Own and Partner Neuroticism Predicting Changes in Marital and Sexual Satisfaction**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Changes in marital satisfaction</th>
<th>Changes in sexual satisfaction</th>
<th>Changes in marital satisfaction controlling changes in sexual satisfaction</th>
<th>Do changes in sexual satisfaction mediate?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Effect size $r$</td>
<td>B</td>
<td>Effect size $r$</td>
</tr>
<tr>
<td><strong>Wives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>107.07</td>
<td></td>
<td>106.42</td>
<td></td>
</tr>
<tr>
<td>Own neuroticism</td>
<td>$-0.39$</td>
<td>$- .20^*$</td>
<td>$-1.04$</td>
<td>$- .30^*$</td>
</tr>
<tr>
<td>Partners’ neuroticism</td>
<td>$-0.21$</td>
<td>$- .09$</td>
<td>$0.03$</td>
<td>$ .01$</td>
</tr>
<tr>
<td><strong>Husbands</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>74.24</td>
<td></td>
<td>159.53</td>
<td></td>
</tr>
<tr>
<td>Own neuroticism</td>
<td>$-0.21$</td>
<td>$- .11$</td>
<td>$-0.78$</td>
<td>$- .25^*$</td>
</tr>
<tr>
<td>Partners’ neuroticism</td>
<td>0.12</td>
<td>$ .04$</td>
<td>$-0.66$</td>
<td>$- .20^*$</td>
</tr>
</tbody>
</table>

Note. Time 2 marital satisfaction was used as the dependent variable, controlled by Time 1 marital satisfaction, thus yielding a measure of residualized change. For changes in marital satisfaction, $df = 123$; for changes in sexual satisfaction, $df = 108$; for changes in marital satisfaction controlling for changes in sexual satisfaction, $df = 103$.

$p < .10$; $^*$ $p < .05$; $^{**}$ $p < .01$. 

\[ + \beta_6 \text{ (wives’ Neuroticism)} + \beta_7 \text{ (husbands’ partner’s Neuroticism)} + \beta_8 \text{ (wives’ partner’s Neuroticism)} + e \]
initial sexual satisfaction, and changes in his or her own sexual satisfaction. Thus, these analyses examined the extent to which own Neuroticism and partners’ Neuroticism accounted for residualized change in marital satisfaction, controlling for changes in sexual satisfaction over the same interval that were independent of initial sexual satisfaction. Results are presented in the third column of Table 3. As can be seen, for husbands, once changes in own sexual satisfaction were controlled, own Neuroticism continued to play a nonsignificant role in accounting for changes in marital satisfaction, though partner’s Neuroticism emerged as a marginal positive predictor of changes in marital satisfaction. For wives, as was the case with the concurrent associations described earlier, once changes in sexual satisfaction were controlled, Neuroticism no longer predicted changes in marital satisfaction. Further, as was the case with concurrent satisfaction, a Sobel test (Sobel, 1982) indicated that changes in wives’ sexual satisfaction fully mediated the effects of own Neuroticism on changes in own marital satisfaction ($z' = -2.19, p < .01$). Subsequent tests revealed no significant sex differences in the effect of own Neuroticism, $\chi^2(1) = 0.62, p = .77$; or partner’s Neuroticism, $\chi^2(1) = 2.46, p = .11$; and no significant differences in the strength of the effects of own Neuroticism versus that of partner’s Neuroticism for wives, $\chi^2(1) = 0.02, p > .50$; or husbands, $\chi^2(1) = 1.07, p = .30$.

Does sexual satisfaction continue to mediate the effects of Neuroticism on marital satisfaction, controlling for evaluations of other specific domains of the marriage? One final analysis was conducted to determine how robust and unique the mediating role of sexual satisfaction appeared to be. To address this issue, we repeated the analysis testing the role of sexual satisfaction in mediating the effects of own and partner Neuroticism on concurrent marital satisfaction, except this time we controlled for each spouse’s evaluations of all eight specific domains of the relationship, obtained from their daily diary reports. Nevertheless, even after controlling for the association between spouse’s evaluations of these eight specific domains and their evaluations of the marriage as a whole, satisfaction with the sexual relationship continued to significantly mediate the effects of own Neuroticism on marital satisfaction for both husbands ($z' = -2.41, p < .01$) and wives ($z' = -2.03, p < .01$). Further, controlling spouses’ evaluations of these eight domains, evaluations of the sexual relationship also continued to significantly mediate the effects of wives’ Neuroticism on husbands’ marital satisfaction ($z' = -1.81, p < .01$), and the estimate of the mediational effect of husbands’ Neuroticism on wives’ marital satisfaction approached the .97 critical value ($z' = -0.90, p < .10$).

Discussion

The current study attempted to clarify the effects of Neuroticism in marriage by testing the prediction that the sexual relationship is one process through which Neuroticism negatively affects the marriage. Consistent with prior research, own Neuroticism predicted lower levels of own marital and sexual satisfaction concurrently for wives and husbands, and both husbands’ and wives’ Neuroticism predicted lower levels of marital satisfaction in their partners concurrently. Further, own Neuroticism predicted declines in wives’ marital satisfaction as well as wives’ and husbands’ sexual satisfaction over the 1st year of marriage. Wives’ Neuroticism was also predictive of husbands’ decline in sexual satisfaction. Despite the fact that significant effects of wives’ Neuroticism emerged more consistently than the effects of husbands’ Neuroticism, subsequent tests revealed no significant sex differences in the effects of own or partner Neuroticism, suggesting that the effects of men’s and women’s Neuroticism on the marriage do not differ. Further, despite the fact that significant effects of own Neuroticism emerged more consistently than the effects of partner Neuroticism, only one difference emerged in the strength of the effects of own versus partner Neuroticism: Wives’ own Neuroticism predicted changes in their sexual satisfaction more strongly than husbands’ Neuroticism predicted changes in wives’ sexual satisfaction. Consistent with predictions, subsequent tests of mediation indicated that the effects of Neuroticism on sexual satisfaction accounted for the effects of Neuroticism on marital satisfaction in every case. Sexual satisfaction continued to mediate the effects of Neuroticism on marital satisfaction once spouses’ evaluations of eight other specific domains of the marriage were controlled, suggesting the uniqueness of the mediating role of sexual satisfaction.

Study Implications

These findings have both theoretical and practical implications. With respect to theory, the current findings highlight the importance of understanding the sexual relationship in order to better understand the link between Neuroticism and marriage. Specifically, it appears that at least part of the reason Neuroticism is associated with lower levels of marital satisfaction is due to specific processes through which Neuroticism affects the sexual relationship. Given that one of the defining components of Neuroticism is negative affectivity (Watson & Clark, 1984), perhaps part of the effect of Neuroticism on marriage is due to negative mood operating through sexual satisfaction. Consistent with this possibility, various negative affective states such as anger and anxiety have been linked to lower levels of sexual arousal (Beck & Bozman, 1995; Bozman & Beck, 1991; Mitchell, DiBartolo, Brown, & Barlow, 1998) and sexual satisfaction (Bélinger, Laughrea, & Lafontaine, 2001), as well as lower levels of marital quality (e.g., Forgas, Levinger, & Moylan, 1994). Additionally, Neuroticism could be related to marriage through its effects on more affect-free cognitive content, such as expectancies. Prior research has demonstrated that individuals high in Neuroticism tend to hold more negative expectancies (Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992), which have been linked to lower sexual satisfaction in wives (McNulty & Fisher, in press) and lower marital quality in both husbands and wives (McNulty & Karney, 2002, 2004). Perhaps part of the negative effect of Neuroticism on marriage is due to lower expectancies operating through sexual satisfaction.
With respect to practice, these findings highlight the importance of the sexual relationship to interventions designed to promote healthy marital functioning. That sexual satisfaction mediated the influence of Neuroticism on marital satisfaction, accounting for at least part of the effects of the most robust personality predictor of marital outcomes (Karney & Bradbury, 1995), suggests that interventions aimed at helping couples deal with the negative aspects of their relationships may benefit by also addressing the sexual component of the relationship. Indeed, several studies have pointed to the bidirectional effects of sexual and marital satisfaction (e.g., Byers, 2005; Henderson-King & Veroff, 1994; Sprecher, 2002).

Limitations

Several factors nevertheless limit interpretations of the current findings. First, although the longitudinal nature of these data enhances our confidence in causal interpretations, such interpretations should be made with caution. For example, although we conceptualized the sexual relationship as a component of the overall marriage and thus the factor that mediates the effect of Neuroticism on the marriage, the causal direction of this relationship remains unclear due to ambiguity in direction of the association between sexual and marital satisfaction (see also Byers, 2005; Henderson-King & Veroff, 1994; Sprecher, 2002). Second, the relatively short time period may have limited our findings. Although both spouses’ personalities emerged as significant predictors of changes in own sexual satisfaction over the short interval of the current study, only wives’ own personality predicted changes in marital satisfaction over the same interval. Future research examining the effects of personality over more substantial lengths of time may demonstrate stronger links between personality and changes in marital satisfaction. Third, whereas the homogeneity of this sample enhances our confidence in the results, generalizations to other samples should be made with caution, partly because the participants were self-selected. Fourth, although the couples were instructed to fill out the questionnaires independently of one another, there is no way to verify that this was done. Finally, although the sample size in this study compared favorably with that of other longitudinal studies of marriage (see Karney & Bradbury, 1995), a larger sample size would have provided greater power.

References


Tamir, M., & Robinson, M. D. (2004). Knowing good from bad: The paradox of Neuroticism, negative affect, and evaluative
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