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Marital Functioning and Depressive Symptoms: Evidence for a Stress Generation Model

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The present study applied C. L. Hammen's (1991) stress generation model to depressive symptoms in the context of marriage. The authors predicted that depressive symptoms would lead to increased marital stress, which would in turn lead to increased depressive symptoms. Social support processes were hypothesized to function as a mechanism by which dysphoric spouses generate stress. Hypotheses were tested in a sample of 154 newlywed couples. Depressive symptoms, marital stress, support perceptions, and support behavior (assessed using observational procedures) were assessed initially and 1 year later. Results provided evidence of marital stress generation among wives, and social support processes functioned as a mechanism of stress generation for wives. Results highlight the cyclical course of dysphoria and stress among wives.

There is clear evidence that marital functioning and depressive symptoms (both clinical levels and more moderate levels) are associated, with the bulk of the evidence showing that marital dysfunction leads to depressive symptoms (e.g., Beach & O'Leary, 1993; Brown & Harris, 1978; Christian-Herman, O'Leary, & Avery-Leaf, 1996). However, in the present article we suggest that marital dysfunction can both lead to, and be a product of, depressive symptoms. In particular, we conceptualize the association between marital functioning and depressive symptoms as a process of *stress generation* (Hammen, 1991).

Hammen (1991) described stress generation as the process by which depressed people contribute to the occurrence of stress in their lives and thereby contribute to their experience of depression. That is, depressed people, in part, cause their own stressful experiences, which then lead to further depression. Although the stress generation model was originally designed to explain a process characteristic of unipolar depression, it has recently been shown to occur in samples with only mild or moderate levels of depressive symptomatology (e.g., Pothoff, Holahan, & Joiner, 1995). Additionally, subclinical levels of depression have been shown to lead to impairment in functioning (e.g., Wells et al., 1989), particularly social role impairment (e.g., not getting along well with others, difficulty negotiating disagreements; Beach, Martin, Blum, & Roman, 1993). In line with these findings, we applied the stress generation model to depressive symptoms occurring in the context of marriage to test the hypothesis that dysphoric spouses generate stress in their marriage, which in turn leads to further dysphoria.[1] We also tested the hypothesis that this stress generation process may be mediated through dysfunctional interactions between spouses. One important type of interaction that occurs between spouses centers on the solicitation and provision of social support (e.g., Weiss, 1980), and recent conceptualizations of depression in marriage highlight the importance of social support processes (e.g., Gotlib & Beach, 1995). Thus, in the present article we examine whether various aspects of marital social support function as mechanisms of stress generation in marriage.

Research on Stress Generation

Initial research on the stress generation process demonstrated that unipolar depressed outpatient women experienced higher levels of stress that they in part caused, than did bipolar, medically ill, and control group women (Hammen, 1991). In particular, the unipolar depressed women experienced more interper-

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[1] We use the terms *depressive symptoms* and *dysphoria* interchangeably throughout this article to refer to mild to moderate symptoms of depression. We chose to use these terms rather than the term *depression* because we used a community sample with relatively low levels of symptoms rather than a clinical sample. We use the term *depression* only when referring specifically to theory or findings relevant to diagnosable forms of depression, or when discussing theoretical implications of our findings.

sonal stressful life events, especially events involving interpersonal conflict (e.g., arguments, relationship endings). This same pattern was observed for the school-age children of unipolar women (Adrian & Hammen, 1993).

These initial demonstrations of stress generation were followed by studies that illustrated the longitudinal course of stress generation and that attempted to identify mechanisms through which depressive symptoms lead people to generate stress (i.e., specific behaviors displayed by dysphoric people that can cause interpersonal stress). Longitudinal evidence of stress generation now exists in samples of children (Sandler, Tein, & West, 1994), adolescents (Davila, Hammen, Burge, Paley, & Daley, 1995), college students (Pothoff et al., 1995), and mothers (Pianta & Egeland, 1994). In addition, these studies suggest that stress generation occurs among people with various levels of depressive symptomatology. This evidence points to a tendency for dysphoric people to create stress in the broad social–interpersonal domain and then to become more dysphoric in response to that stress. However, mechanisms of stress generation have not been clearly identified. Hammen (1991) suggested that cognitive, affective, and behavioral characteristics of depressed people cause them to generate stress. For example, a depressed person may behave in a way that will increase the likelihood of the occurrence of a stressful event, that will make events inherently more stressful, or both. Two studies have investigated potential mechanisms (Davila et al., 1995; Pothoff et al., 1995) but met with limited results. Thus, further work is needed to identify exactly what depressed or dysphoric people do to generate interpersonal stress.

Because it is interpersonal stress that is implicated in the stress generation process (Adrian & Hammen, 1993; Hammen, 1991), its application to the marital relationship is obvious as this relationship is likely to be a primary relationship for many people and one that requires ongoing interpersonal negotiation. In addition, the marital relationship provides a prime arena for examining interpersonal mechanisms that might drive the process.[2] Prior examinations of stress generation have focused on mechanisms thought to be behavioral in nature (e.g., interpersonal problem solving, reassurance seeking; Davila et al., 1995; Pothoff et al., 1995) but that were assessed by means of self-report, which may be biased by depressive symptoms. To overcome this problem, in the present study we directly observed the behavior of dysphoric spouses. In addition, whereas prior studies have focused on behavioral mechanisms only, in the present study we focused on both cognitive and behavioral mechanisms. Thus it provides a more thorough test of potential mechanisms than do prior studies.

Studying stress generation among married couples also allowed us to address another limitation on our understanding of the stress generation process. Prior studies on this subject have been conducted with samples of women, or with samples of women and men combined. Research examining stress generation in men, or comparing men and women, is lacking but is important given the existence of gender differences in rates and course of depression (e.g., Nolen-Hoeksema, 1990; Winokur, Coryell, Keller, Endicott, & Akiskal, 1993). In the present study we examined the marital stress generation process in women and men separately.

Stress Generation in Marriage

A consistent association between depression and marital functioning has been documented by researchers from such diverse traditions in psychology as the study of psychosocial factors (e.g., Beach, Sandeen, & O'Leary, 1990; Brown & Harris, 1978) and behavioral genetics (Kendler et al., 1995). Much of the evidence for this association points to marital discord as a precursor to depression, and marital researchers have typically considered this direction of effect to be the important causal direction (see Beach et al., 1990; Gotlib & Beach, 1995; Weiss & Heyman, 1990a).

However, according to the stress generation model of depression, the opposite direction of effect—depression as a precursor to marital discord—also is an important causal direction. Interpersonal theories of depression, which posit that depressed people are deficient in social skills (e.g., Lewinsohn, 1974) or that depressed people engage in behaviors that hinder successful interpersonal relating (e.g., Coyne, 1976), suggest the same. Cross-sectional research has confirmed that depressed or dysphoric individuals engage in a host of behaviors that are potential stress generators (for reviews, see Gotlib & Beach, 1995; Gotlib & McCabe, 1990; Weiss & Heyman, 1990b). For example, during marital interactions, depressed wives display more sad affect, are more self-denigrating, and express more psychological and physical complaints (Beach & Nelson, 1990; Biglan et al., 1985). From a stress generation perspective, behaviors such as these would be predicted to have a negative impact on the marital relationship by increasing stress in the marriage. To date, however, adequate longitudinal research to test such predictions has been lacking. In the present study we tested the impact of depressive symptoms on marital behavior, stress, and subsequent symptomatology, using a longitudinal design.

Social Support as a Mechanism of Stress Generation in Marriage

Social support is increasingly being recognized as an important aspect of marital functioning (e.g., Cutrona, Suhr, & MacFarlane, 1990; Pasch & Bradbury, in press; Pasch, Bradbury, & Sullivan, 1997). In addition, social support in marriage has been linked to depression vulnerability, with research showing that the presence of a supportive marital relationship decreases vulnerability to depression, whereas the absence of a supportive marital relationship increases vulnerability (e.g., Brown & Harris, 1978; Jacobson, Fruzzetti, Dobson, Whisman, & Hops, 1993; Monroe, Bromet, Connell, & Steiner, 1986). Thus, social support appears to affect both marital functioning and depressive symptoms, and as such it is an appropriate candidate for a mechanism of the marital stress generation process.

We focused on two aspects of social support that may be implicated in the marital stress generation process: perceptions of support and actual social support behavior. Perceptions of

[2] The stress generation model proposes that interpersonal stress, especially stress related to interpersonal conflict, is always at least partially caused by the depressed person. Marital stress is a form of interpersonal stress and as such can be considered to be caused in part by the dysphoric spouse.

support, a potential cognitive mechanism of marital stress generation, are associated with depressive symptoms and with marital satisfaction. Spouses who report higher levels of support from their partners are more maritally satisfied than those who report lower levels of support (e.g., Acitelli & Antonucci, 1994; Julien & Markman, 1991) and, consistent with the idea that depressed people tend to view the world negatively (Beck, 1967), people with depressive symptoms tend to report lower quality social support (e.g., Billings & Moos, 1984). In addition, perceived satisfaction with support in marriage is associated with fewer depressive symptoms longitudinally (e.g., Monroe et al., 1986). Thus, from a marital stress generation perspective, spouses with depressive symptoms might perceive their partners to be less supportive, and these perceptions might lead to increased marital stress, which in turn might lead to increased depressive symptoms.

Social support behavior, a potential behavioral mechanism of marital stress generation, is also associated with depression and marital satisfaction. Observed social support behavior predicts marital satisfaction and stability (Pasch & Bradbury, in press), and depressive symptoms are associated with various behaviors relevant to the solicitation and provision of support (see Gotlib & Beach, 1995, for a review). For example, depressive symptoms are associated with self-focused and negatively toned behavior (Jacobson & Anderson, 1982), less responsiveness to others (Youngren & Lewinsohn, 1980), and expressions of helplessness (Blumberg & Hokanson, 1983). Consequently, people high in depressive symptoms have been rated by observers as less effective in soliciting and providing support (Rook, Pietromonaco, & Lewis, 1994). Moreover, interactions of couples in which one spouse is depressed have consistently been found to be negative, hostile, and conflictual (e.g., Gotlib & Whiffen, 1989; Kahn, Coyne, & Margolin, 1985; see Gotlib & Beach, 1995, for a review). Although studies of depression and marital functioning have typically focused on behavior exhibited during conflict or problem-solving interactions, behavior in social support interactions may be equally negative and may thus result in marital stress. Therefore, spouses high in depressive symptoms might exhibit more negative social support behavior. This behavior might lead to marital stress, which in turn might lead to increased depressive symptoms.

Hypotheses and Overview of Study

The primary goals of the study were to examine (a) whether a stress generation process operates in marriage and (b) cognitive and behavioral aspects of social support as a mechanism through which dysphoric spouses might create stress in their marriage. Figure 1 depicts the associations that we hypothesized. In line with a stress generation process, we expected depressive symptoms to lead to increased marital stress, which would in turn lead to increased depressive symptoms. We also expected social support to function as a mechanism of marital stress generation. Three alternative pathways were tested. First, depressive symptoms might be associated with negative perceptions or expectations of social support from the partner. These negative perceptions might have a direct association with subsequent marital stress. Second, depressive symptoms might be associated with dysfunctional social support behavior when interacting with the partner. This behavior would then have a direct association with subsequent marital stress. These alternatives imply that the mechanism of marital stress generation is either cognitive or behavioral. However, a third possibility is that perceptions of social support have an indirect association with stress through their effect on support behavior. In this case, depressive symptoms would be associated with perceptions or expectations of less support. These perceptions would be associated with dysfunctional support behavior, and this behavior would lead to marital stress. This alternative implies that multiple mechanisms are involved in the marital stress generation process.

We tested the hypotheses with a series of structural equation models conducted separately for husbands and wives. We also examined positive and negative social support behaviors in separate models, because past research has shown that positive and negative behaviors have differential associations with marital functioning (see Weiss & Heyman, 1990b).

As can be seen in Figure 1, initial marital stress was included in the model. This is necessary for two reasons. First, it addresses a potential limitation of prior stress generation work in which associations between depressive symptoms and subsequent stress did not take into account prior stress levels. Showing that depressive symptoms are associated with subsequent marital stress controlling for the effects of prior marital stress would provide strong evidence for a stress generation process in marriage. Second, it is possible that associations between depressive symptoms and marital cognitions and behavior may be due to unmeasured effects of prior levels of marital stress on both variables. Including initial level of marital stress in the model allowed us to examine this possibility.

One of the advantages of studying stress generation processes in married couples is that each spouse's role in the process can be examined. Doing so is critical to adequately testing predictions about stress and depression in their interpersonal context. Thus, an additional goal of our study was to investigate cross-spouse effects in stress generation. Research has indicated that depressed people tend to be rejected by others with whom they are interacting (e.g., Howes & Hokanson, 1979; see Gotlib & Beach, 1995, for a review). We therefore conducted separate analyses to examine whether one spouse's perceptions and behavior would mediate the relation between the partner's depressive symptoms and that partner's subsequent stress. We tested the same three alternative pathways as described earlier.

Method

Participants

Participants were 172 newlywed couples in first marriages who are participating in an ongoing, longitudinal study of marriage. All couples were recruited from marriage licenses filed in Los Angeles County. To be eligible to participate, both spouses had to be over 18 years of age, have at least a tenth grade education, speak English, have no children, and have no immediate plans to move from the area. Wives had to be under 35 years of age, thus allowing for the possibility that all couples could become parents during the course of the larger project. Marriage licenses in Los Angeles County include both spouses' address, age, years of education, and number of previous marriages. Couples who were eligible on the basis of this information were sent letters inviting them

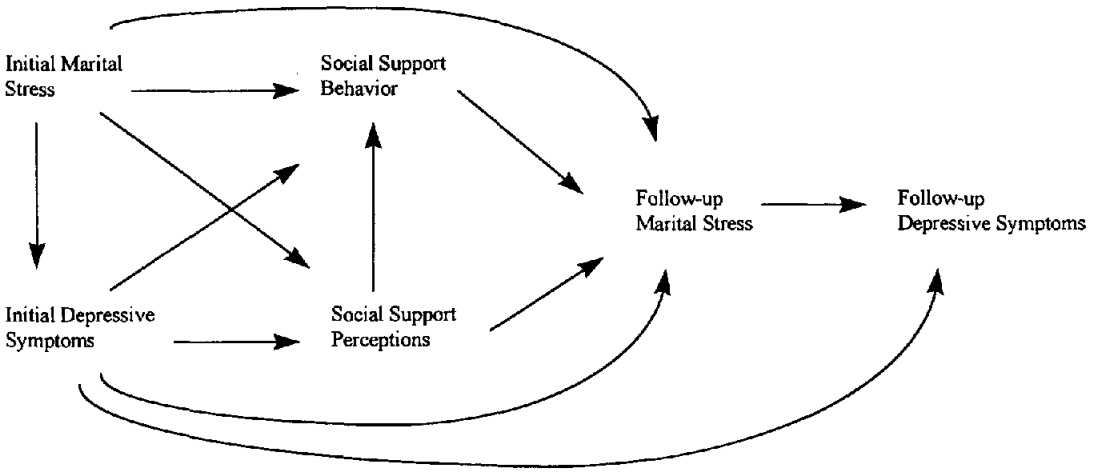

Figure 1. Hypothesized marital stress generation model.

to participate in the study. Of the 3,606 letters that were sent, 637 couples (17.8%) expressed interest in participating, 41 letters (1.1%) were returned as undeliverable, and 2,928 letters (81.2%) went unanswered. The 17.8% response rate is similar to that of other studies recruiting married couples from public records (e.g., 18% by Kurdek, 1991; 17% by Spanier, 1976). Compared to the 2,928 nonrespondents, the 637 respondents were more likely to have cohabitated premaritally (42.9% vs. 35.3%), had more years of education (for wives, 15.4 years vs. 14.5 years; for husbands, 15.2 years vs. 14.6 years), and the wives were older (26.6 years vs. 26.2 years); as might be expected, respondents also had higher status jobs (see Karney et al., 1995). The couples who expressed interest in participating were screened further with a telephone interview to ensure that the remaining eligibility criteria were met. The first 172 couples who met the eligibility criteria and who kept their laboratory appointment formed the sample. All couples had been married less than 6 months when they were enrolled in the study. Couples participated in an initial laboratory session and then participated in a follow-up session 1 year later. Only those couples who provided complete data at the initial and follow-up sessions were included in the present analyses (154 couples, or 90%). Of the couples for whom complete data were not available, 8 did not complete all measures (but are still in the study), 4 divorced or separated, and 3 dropped out of the study.

Wives averaged 26.0 years of age (SD = 3.4) and 16.2 years of education (SD = 2.0), and their median annual income ranged from $11,000 to $20,000. Sixty-one percent were Caucasian, 15% were Asian American/Pacific Islander, 5% were African American, 16% were Latina/Chicana, 2% were Middle Eastern, and 1% identified themselves as "other." Husbands averaged 27.6 years of age (SD = 3.9), and 15.6 years of education (SD = 2.2), and their median annual income ranged from $21,000 to $30,000. Sixty-seven percent were Caucasian, 13% were Asian American/Pacific Islander, 4% were African American, 15% were Latino/Chicano, and 1% were Middle Eastern.

Procedure

All participants attended an initial laboratory session and a follow-up session 1 year later. At each session, participants completed questionnaires independently, engaged in social support discussions with their spouses, and were interviewed individually. Couples were paid for their participation.

Measures

Depressive symptoms. We assessed depressive symptoms with the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). The BDI is a widely used 21-item self-report measure that has shown adequate reliability (coefficient alpha consistently exceeds .80) and has been well validated in nonpsychiatric samples (see Beck, Steer, & Garbin, 1988). Participants completed the BDI at the initial and the follow-up session. They were asked to complete the measure on the basis of their experiences in the past week.

Chronic marital stress. We assessed chronic marital stress with an interview based on the chronic stress interview used by Hammen et al. (1987). In the interview, the following aspects of the marital relationship were probed: investment in the relationship; the extent to which the relationship was close, confiding, and supportive; trust and dependability in the relationship; acceptance; quality of sex life; decision-making skills; frequency of arguments; conflict resolution skills; and conflicts over religion. Participants were asked to describe, in detail, these aspects of their relationship over the past 6 months,[3] and interviewers probed for specific behavioral indicators of each aspect (e.g., exactly how much time the couple spends together, the number of arguments in the last 6 months, length of each argument, and frequency and types of disclosures).[4] Interviewers then rated the descriptions on a 9-point scale with behaviorally specific anchors at points 1, 3, 5, 7, and 9. A rating of 1 reflected extremely positive circumstances, whereas a rating of 9 reflected extremely adverse (stressful) circumstances. This objective rating method was used to eliminate the possibility that associations between depressive symptoms and stress are due to reporting biases. Interrater reliability (intraclass correlations) was .84 for 46 randomly chosen initial interviews and .83 for 39 randomly chosen follow-up interviews. To adequately test the stress generation model, the assessment of stress must represent stress in the period of time leading up to the outcome assessment of depression. Chronic marital stress assessed at the initial interview represents the level of marital stress in the 6 months preceding the initial assessment of BDI symptoms, and chronic marital stress assessed at the follow-up represents the level of marital stress in the 6 months preceding the follow-up assessment of BDI symptoms.

Social support behavior. We assessed social support behavior using

[3] Most couples had not been married 6 months at the initial interview, so the chronic stress assessment at this time included the few months leading up to their marriage. Even though this may not be marital stress per se, it still provides an estimate of the relationship stress experienced by each member of the couple.

[4] Additional information regarding the chronic marital stress interview can be obtained from Joanne Davila.

two 10-min videotaped interaction tasks at the initial session. Each spouse was told to "think of something that you would like to work on or change in yourself." Participants were told that this could be anything as long as it was not currently a conflict in their marriage. Each spouse then discussed their topic with their partner for 10 min, with a short break between discussions. The partner was instructed to respond to his or her spouse in any way he or she would like. This procedure results in one 10-min interaction in which the husband is soliciting support (acting as the *helpee*), and the wife is providing support (acting as the *helper*) and another 10-min interaction in which the wife is soliciting support (the helpee) and the husband is providing support (the helper). Spouses discussed their topics in a randomly determined order. Typical topics included exercising more, getting a better job, becoming more motivated, and becoming more self-confident.

We coded the social support discussions using the Social Support Interaction Coding System (Bradbury & Pasch, 1992; see Pasch et al., in press, for a detailed description). This is a microanalytic system in which each speech turn of the helpee and the helper is coded for positive and negative behaviors. Helper behaviors are classified as either positive instrumental (e.g., specific, helpful questions, information, or advice), positive emotional (e.g., reassurance, encouragement, validation), positive other (all other positive behaviors that facilitate the discussion), or negative (e.g., criticism, rejection, blaming, minimization or exaggeration of problem, being inattentive or disengaged). Helpee behaviors are classified as either positive (e.g., specific, clear analysis of problem, clear statement of feelings, asking for help or stating needs in a useful way, responding positively to helper) or negative (e.g., demanding help, criticizing, blaming, accusing, or rejecting helper, whining or complaining). Helpees and helpers can be coded as off task or neutral, but those behaviors were not considered in the present analyses. Interrater reliabilities (Pearson correlations) for 49 randomly chosen participants were .75 for positive instrumental helper, .80 for positive emotional helper, .86 for positive other helper (.86 for all positive helper behavior), .80 for negative helper, .79 for positive helpee, and .75 for negative helpee.

We computed rates of behavior in each category by dividing the number of instances of each behavior observed by the total number of speech turns (e.g., number of positive helpee ÷ total number of helpee speech turns) in order to reflect the proportion of each behavior exhibited during the interaction.[5] To reduce the number of variables, for helpers, positive instrumental, positive emotional, and positive other behaviors were summed for a total positive helper score (see Pasch & Bradbury, in press).[6]

Social support perceptions. Social support perceptions were assessed immediately before the 10-min interaction in which each spouse engaged in the discussion of his or her own problem (i.e., acted as the helpee). Spouses (helpees) answered the question "what will be the emotional tone of the discussion?" Ratings were made on a 9-point scale ranging from *negative or critical* (1) to *positive or supportive* (9).

Overview of Data Analysis

We tested the predictions depicted in Figure 1 as a structural equation model using EQS (Bentler, 1995). Maximum likelihood estimation was used. We tested separate models for husbands and wives and for positive and negative social support behavior, resulting in four within-spouse models: wives' model with negative behavior, wives' model with positive behavior, husbands' model with negative behavior, and husbands' model with positive behavior. Social support behavior was considered a latent variable indicated by negative helpee and negative helper behavior when assessing negative social support behavior and positive helpee and positive helper behavior when assessing positive social support behavior. For example, in the within-spouse model for wives, the negative social support latent variable was indicated by her negative behavior when she was a helpee and her negative behavior when she was a helper. This negative social support latent variable thus represented the extent to which a wife behaved in a negative manner across interactional roles.

We tested cross-spouse effects of social support behavior in stress generation in a manner similar to that described above. There were two differences. First, the partner's perceptions were included instead of the spouse's own perceptions. Second, a latent variable representing the partner's behavior was included in the model rather than the latent variable representing the spouse's own behavior. For example, a cross-spouse model testing stress generation in wives would include husbands' support perceptions and social support behavior rather than wives' perceptions and behavior, while still including wives' measures of depressive symptoms and stress. Four cross-spouse models were tested: wives' model with husbands' negative behavior, wives' model with husbands' positive behavior, husbands' model with wives' negative behavior, and husbands' model with wives' positive behavior.

Results

Zero-order correlations, means, and standard deviations for all the variables in the analyses for wives and husbands are shown in Tables 1 and 2, respectively.[7] Path coefficients and factor loadings are shown in Table 3 for all within-spouse models and in Table 4 for all cross-spouse models. For all analyses, $N = 154$.

[5] Proportion scores were used on the basis of the assumption that the relative frequency of each type of behavior exhibited is more reflective of the content of the interaction as a whole. For example, a spouse who exhibits negative behaviors during 50% of the interaction is considered to be behaving more negatively than a spouse who exhibits negative behaviors during 25% of the interaction, even if they both exhibit the same number of negative behaviors. However, the number of behaviors alone may also be an adequate measure. Therefore, we also conducted all analyses using number of behaviors as the relevant social support measure. Results of these analyses paralleled those in which we used the proportion scores.

[6] The negative helper and helpee variables were positively skewed, as is often the case with microanalytic behavioral data. We thus transformed these variables by adding 1 to each case and then computing a log transformation. These transformed variables were used in all analyses.

[7] Examination of the means revealed that there was a low base rate of depressive symptoms for husbands and wives. However, participants did experience changes in symptoms over time. Thirty-six percent of husbands and 40% of wives had an increase in depressive symptoms at the 1-year follow-up (42% of husbands and 48% of wives had a decrease in symptoms). For husbands, increases in symptoms ranged from 1 to 16 points on the BDI. For husbands who had an increase in symptoms, the mean increase was 3.12 BDI points ($SD = 2.53$, mode = 1). For wives, increases in symptoms ranged from 1 to 17 points on the BDI. For wives who had an increase in symptoms, the mean increase was 3.76 ($SD = 3.38$, modes = 1 and 2). For husbands who had a decrease in symptoms the mean decrease was 2.78 ($SD = 2.01$, mode = 1). For wives who had a decrease in symptoms the mean decrease was 3.26 ($SD = 2.78$, mode = 1).

Table 1
Zero Order Correlations, Means, and Standard Deviations for All Variables in Analyses for Wives

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	*M*	*SD*
1. T1 BDI	—														4.49	4.14
2. T2 BDI	.46**	—													4.35	4.29
3. T1 marital stress	.32**	.23**	—												3.34	1.45
4. T2 marital stress	.37**	.33**	.50**	—											3.50	1.44
5. Wife SS perc.	−.22*	−.17*	−.20**	−.17*	—										7.62	1.61
6. Wife neg. HE	.21**	.15**	.25**	.32**	−.16*	—									0.06	0.10
7. Wife neg. HR	.19**	.00	.19**	.24**	−.22*	.50**	—								0.05	0.11
8. Wife pos. HE	−.18**	−.09	−.13	−.21**	.15*	−.68**	−.32**	—							0.65	0.22
9. Wife pos. HR	−.15*	−.11	−.17*	−.13	.18**	−.41**	−.69**	.41**	—						0.64	0.22
10. Husb. SS perc.	−.13	−.11	−.22*	−.17*	.14*	−.13	−.24**	.09	.18**	—						
11. Husb. neg. HE	.18**	−.06	.12	.20**	−.15*	.36**	.77**	−.29**	−.54**	−.34*	—					
12. Husb. neg. HR	.04	.09	.12	.19**	−.01	.68*	.36**	−.54**	−.33**	−.18**	.41**	—				
13. Husb. pos. HE	−.16*	−.09	−.10	−.17*	.10	−.33**	−.56**	.36**	.83**	.25**	−.61**	−.35**	—			
14. Husb. pos. HR	−.09	−.10	−.09	−.16*	.04	−.49**	−.24**	.77**	.34**	.12	−.30**	−.67**	.37**	—		

Note. $N = 154$. T1 = initial interview; T2 = follow-up interview; BDI = Beck Depression Inventory; SS perc. = social support perceptions; neg. HE = negative helpee behavior; neg. HR = negative helper behavior; pos. HE = positive helpee behavior; pos HR = positive helper behavior; Husb. = husband.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Table 2
Zero Order Correlations, Means, and Standard Deviations for All Variables in Analyses for Husbands

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	*M*	*SD*
1. T1 BDI	—														3.97	4.04
2. T2 BDI	.70**	—													3.83	4.35
3. T1 marital stress	.30**	.20**	—												3.33	1.42
4. T2 marital stress	.27**	.33**	.63**	—											3.62	1.40
5. Husb. SS perc.	−.22**	−.16*	−.33**	−.21**	—										7.66	1.51
6. Husb. neg. HE	.16*	.13	.30**	.23**	−.34**	—									0.04	0.08
7. Husb. neg. HR	.18**	.11	.27**	.21**	−.18**	.41**	—								0.06	0.11
8. Husb. pos. HE	−.06	−.04	−.19**	−.13	.25**	−.61**	−.35**	—							0.67	0.22
9. Husb. pos. HR	−.17*	−.12	−.23**	−.19**	.12	−.30**	−.67**	.37**	—						0.60	0.23
10. Wife SS perc.	−.02	−.16*	−.23**	−.27**	.14*	−.15*	−.01	.10	.04	—						
11. Wife neg. HE	.04	.04	.22**	.24**	−.13	.36**	.67**	−.33**	−.49**	−.16*	—					
12. Wife neg. HR	.07	.11	.31**	.20**	−.24**	.77**	.36**	−.56**	−.24**	−.22**	.50**	—				
13. Wife pos. HE	−.06	−.04	−.20**	−.20**	.09	−.29**	−.54**	.36**	.77**	.15*	−.68**	−.32**	—			
14. Wife pos. HR	−.02	−.03	−.21**	−.10	.18**	−.54**	−.33**	.83**	.34**	.18**	−.41**	−.69**	.41**	—		

Note. $N = 154$. T1 = initial interview; T2 = follow-up interview; BDI = Beck Depression Inventory; Husb. = husband; SS perc. = social support perceptions; neg. HE = negative helpee behavior; neg. HR = negative helper behavior; pos. HE = positive helpee behavior; pos HR = positive helper behavior.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Table 3
Path Coefficients and Factor Loadings for Within-Spouse Models

Path	Wives' model		Husbands' model	
	Negative behavior	Positive behavior	Negative behavior	Positive behavior
Initial stress → initial symptoms	.32**	.30**	.30**	.30**
Initial stress → support perceptions	−.14*	−.15*	−.29**	−.29**
Initial stress → support behavior	.23*	−.16	.30**	−.30*
Initial stress → follow-up stress	.37**	.40**	.59**	.57**
Initial symptoms → support perceptions	−.18*	−.17*	−.13*	−.14*
Initial symptoms → support behavior	.17*	−.13	.08	−.04
Initial symptoms → follow-up stress	.19**	.23**	.09	.10
Initial symptoms → follow-up symptoms	.38**	.39**	.66**	.67**
Support perceptions → support behavior	−.17*	.24*	−.29**	.19
Support perceptions → follow-up stress	.01	−.01	.03	.02
Support behavior → follow-up stress	.22*	−.10	.06	−.02
Follow-up stress → follow-up symptoms	.22**	.19*	.16**	.15*
Social support factor				
Helper	.66**	.60**	.57**	.63**
Helpee	.79**	.67**	.77**	.62**

Note. $N = 154$.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

Within-Spouse Models Including Negative Social Support Behavior

Wives. This model fit the data well, $\chi^2(7, N = 154) = 7.64$, $p = .37$, comparative fit index (CFI) = .997, root mean square error of approximation (RMSEA) = .025, and both negative behaviors loaded significantly on the social support factor. Figure 2 depicts the pattern of associations among the variables. Consistent with a process of marital stress generation, initial depressive symptoms were associated with follow-up chronic marital stress controlling for the association between initial and follow-up marital stress. Follow-up marital stress was in turn associated with further depressive symptoms (controlling for initial depressive symptoms). Regarding social support as a mechanism of this process, initial depressive symptoms were associated with negative perceptions of the upcoming interaction and with negative support behavior, controlling for associations between initial stress and the social support variables (which were significantly associated). Perceptions were also associated with negative social support behavior, which was in turn associated with subsequent marital stress (controlling for initial marital stress). Because initial symptoms had both a direct and an indirect association with negative support behavior, we tested two nested models. First we tested a model in which the path from perceptions to behavior was deleted. This model, which included only the direct association of initial symptoms and behavior, fit the data, $\chi^2(8, N = 154) = 10.62$, $p = .22$, CFI = .997, RMSEA = .025, and the chi-square difference, $\chi^2(1, N = 154) = 2.98$, was not significant, suggesting that the two models are not significantly different. Second, we tested a model in which the path from initial symptoms to behavior was deleted. This model, which included only the indirect association of initial symptoms and behavior through perceptions, also fit the data, $\chi^2(8, N = 154) = 10.54$, $p = .23$, CFI = .986, RMSEA = .05, and the chi-square difference, $\chi^2(1, N = 154) = 2.90$, was not significant, suggesting that the two models are not significantly different. Thus, both the model including the direct association between initial symptoms and negative behavior and the model including the indirect association were adequate representations of the data.[8]

Husbands. This model fit the data well, $\chi^2(7, N = 154) = 7.92$, $p = .34$, CFI = .997, RMSEA = .03, and both negative behaviors loaded significantly on the social support factor, but a number of key predicted paths were not significant. Figure 3 depicts the pattern of associations between the variables. Although associated at the zero-order level, initial depressive symptoms were not associated with follow-up chronic marital stress controlling for the association between initial and follow-up marital stress. Similarly, although initial symptoms were weakly associated with support perceptions, initial symptoms were not associated with negative social support behaviors controlling for the association between initial marital stress and negative behavior, and perceptions and behavior were not associated with follow-up marital stress controlling for the association between initial and follow-up marital stress. Initial marital stress was associated with initial symptoms, negative perceptions, and negative behavior, and follow-up marital stress was associated with follow-up symptoms. Finally, negative perceptions were associated with negative behavior.

Within-Spouse Models Including Positive Social Support Behavior

Wives. This model fit the data well, $\chi^2(7, N = 154) = 4.22$, $p = .75$, CFI = 1.00, RMSEA = .000, and both positive behaviors loaded significantly on the social support factor. However, unlike the results for the model including negative behavior depicted in Figure 2, positive behaviors were not significantly associated with any variable in the model except for perceptions of support (even though wives' positive helpee behavior was associated with initial symptoms, initial stress, and follow-up stress at the zero-order level). As in the previous model for wives, the paths leading from initial stress to follow-up stress, initial stress to support perceptions, initial stress to initial symptoms, initial symptoms to follow-up stress, initial symptoms to follow-up symptoms, initial symptoms to support perceptions,

[8] Because only the helpee's perceptions of support were assessed, we reconducted the analysis including only helpee behavior. The results of this analysis paralleled those of the original analysis. We conducted a similar reanalysis for all models tested in this study, and all results were consistent with the original analyses.

Table 4
Path Coefficients and Factor Loadings for Cross-Spouse Models

Path	Wives' model		Husbands' model	
	Negative behavior	Positive behavior	Negative behavior	Positive behavior
Initial stress → initial symptoms	.32**	.30**	.30**	.30**
Initial stress → support perceptions	−.20*	−.22**	−.24**	−.26**
Initial stress → support behavior	.04	−.07	.03	−.37**
Initial stress → follow-up stress	.40**	.40**	.56**	.56**
Initial symptoms → support perceptions	−.06	−.10	.05	.06
Initial symptoms → support behavior	.13	−.07	−.03	.03
Initial symptoms → follow-up stress	.21**	.24**	.10	.11
Initial symptoms → follow-up symptoms	.38**	.39**	.66**	.67**
Support perceptions → support behavior	−.35**	.27**	−.19*	.22*
Support perceptions → follow-up stress	.01	−.01	−.14	.15*
Support behavior → follow-up stress	.14	−.14	.03	−.06
Follow-up stress → follow-up symptoms	.22*	.19*	.16**	.15*
Social support factor				
Helper	.50**	.54**	.83**	.63**
Helpee	.87**	.72**	.64**	.64**

Note. $N = 154$.
* $p < .05$, one-tailed. ** $p < .01$, one-tailed.

and follow-up stress to follow-up symptoms were significant ($p < .05$). The paths leading from initial symptoms to positive behavior, initial stress to positive behavior, support perceptions to follow-up stress, and positive behavior to follow-up stress were not significant ($p > .05$).

Husbands. This model fit the data well, $\chi^2(7, N = 154) = 9.03$, $p = .25$, CFI = .992, RMSEA = .040, and both positive behaviors loaded significantly on the social support factor, but many predicted paths were not significant. The pattern of results is similar to those in the previous model for husbands depicted in Figure 3. The paths leading from initial stress to follow-up stress, initial stress to support perceptions, initial stress to positive behavior, initial stress to initial symptoms, initial symptoms to support perceptions, initial symptoms to follow-up symptoms, and follow-up stress to follow-up symptoms were significant ($p < .05$). The paths leading from initial symptoms to follow-up stress, initial symptoms to positive behavior, positive behavior to follow-up stress, and support perceptions to follow-up stress were not significant ($p > .05$), even though husbands' positive helper behavior was associated with initial symptoms and follow-up stress at the zero-order level. Unlike the results depicted in Figure 3, however, support perceptions were not significantly associated with positive behavior.

Cross-Spouse Models Including Negative Social Support Behavior

Wives. This model nearly fit the data, $\chi^2(7, N = 154) = 13.89$, $p = .05$, CFI = .960, RMSEA = .08, and both negative behaviors loaded significantly on the husband social support factor. However, there was only one significant association between wives' and husbands' variables: Wives' initial marital stress was associated with husbands' support perceptions (although husbands' perceptions and various aspects of husbands' negative behavior were associated with wives' initial symptoms and initial and follow-up stress at the zero-order level). As shown earlier, husbands' perceptions were significantly associated with husbands' behavior. The associations between the wives' variables were the same as in previous models. Initial depressive symptoms were associated with follow-up chronic marital stress controlling for the association between initial and follow-up marital stress. Follow-up marital stress was in turn associated with further depressive symptoms (controlling for initial depressive symptoms).

Husbands. This model also nearly fit the data, $\chi^2(7, N = 154) = 14.47$, $p = .04$, CFI = .973, RMSEA = .08, and both negative behaviors loaded significantly on the wife social support factor. There were two associations between husbands' and wives' variables. Husbands' initial marital stress was associated with wives' support perceptions, and wives' perceptions were associated with subsequent marital stress. Wives' negative behavior was associated only with wives' perceptions. Associations between husband variables were the same as in previous models. Initial depressive symptoms were not associated with follow-up chronic marital stress controlling for the association between initial and follow-up marital stress. Initial marital stress was associated with initial symptoms and follow-up marital stress, initial symptoms were associated with follow-up symptoms, and follow-up marital stress was associated with follow-up symptoms.

Cross-Spouse Models Including Positive Social Support Behavior

Wives. This model fit the data well, $\chi^2(7, N = 154) = 1.14$, $p = .99$, CFI = 1.00, RMSEA = .000, and the pattern of results was the same as that for the wives' cross-spouse model including negative behavior. There was one significant association between wives' and husbands' variables: Wives' initial marital stress was associated with husbands' support perceptions (although husbands' perceptions and positive behaviors were associated with wives' follow-up stress at the zero-order level). As shown earlier, husbands' perceptions were significantly associated with husbands' behavior. The associations between the wives' variables were the same as in previous models.

Husbands. This model fit the data well, $\chi^2(7, N = 154) = 13.08$, $p = .07$, CFI = .976, RMSEA = .076, and the pattern of results was similar to that for the husbands' cross-spouse model including negative behavior. In this case, there were three associations between husbands' and wives' variables. Husbands' initial marital stress was associated with wives' support perceptions, and wives' perceptions were associated with subsequent marital stress. Husbands' initial marital stress was also associ-

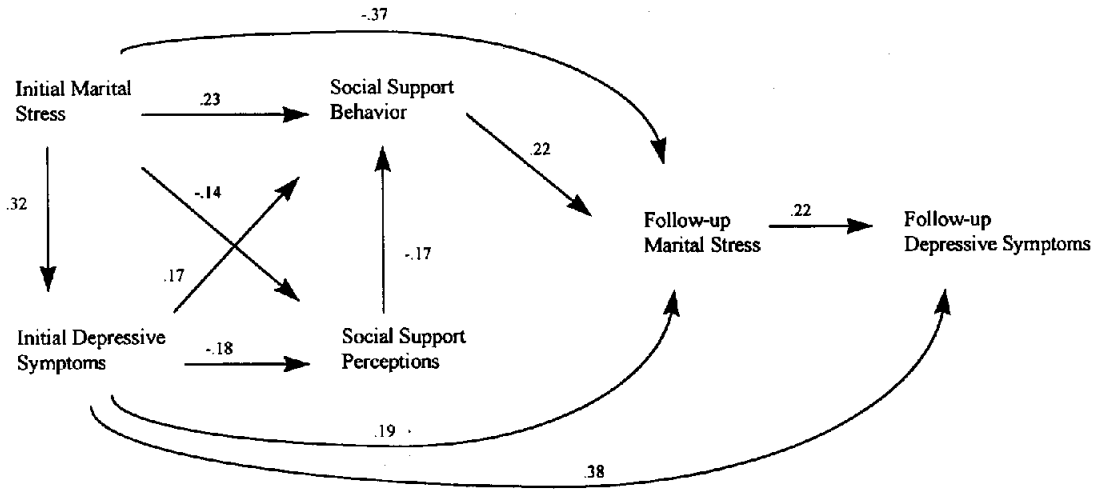

Figure 2. Pattern of results for within-spouse model for wives, including negative social support behavior. Only significant paths are shown ($p < .05$, one-tailed).

ated with wives' positive behavior. As shown earlier, wives' perceptions were also associated with wives' positive behavior. Associations between husband variables were the same as in previous models.

Discussion

Overview and Summary of Results

In the present study we conceptualized the association between depressive symptoms and marital dysfunction as a process of marital stress generation and predicted that (a) dysphoric spouses would create stress in their marriage, which would in turn lead to further dysphoria, and (b) social support perceptions and behavior would function as a mechanism of stress generation in marriage. We tested the hypotheses in a 1-year longitudinal study of newlywed marriage that used objective measures of marital stress and social support behavior. Clear evidence of stress generation was found among wives. Moreover, social support perceptions and behavior appeared to mediate the association between depressive symptoms and subsequent stress. For husbands, social support perceptions and behavior appeared to be largely a product of marital stress. Few cross-spouse effects were found, although spouses' initial marital stress was consistently associated with their partners' support perceptions. Specifically, higher levels of stress were associated with expectations of negative support.

The results suggest that the association between depressive symptoms and marital dysfunction among wives can appropriately be conceptualized as a stress generation process. Consistent with prior research conducted with women (e.g., Davila et al., 1995; Hammen, 1991; Pianta & Egeland, 1994), to the extent that wives were dysphoric, they experienced more marital stress, which led them to become more dysphoric. This finding is particularly noteworthy because these results emerged when we controlled for initial levels of marital stress, suggesting that depressive symptoms are not only associated with subsequent stress but also lead to changes in marital stress. The results thus provide strong support for a marital stress generation process in women that occurs even at relatively low levels of depressive symptoms.

These findings also highlight the bidirectional nature of the association between depressive symptoms and marital functioning for women. Although recent models of marital discord and depression describe the association as bidirectional (e.g., Gotlib & Beach, 1995), most of the research has pointed to an effect of marital discord on depressive symptoms (e.g., Beach et al., 1990; Brown & Harris, 1978; Kendler et al., 1995). The present findings replicate this effect, but they also provide evidence for the opposite direction of effect—wives' depressive symptoms have important negative effects on their later marital functioning.

The results also suggest that social support may function as a mechanism of marital stress generation among wives. Three alternative pathways were tested, and the results supported the direct pathway from depressive symptoms to support behavior and the indirect pathway that included both support perceptions and support behavior. The direct pathway showed that wives with higher levels of dysphoria solicited, received, and provided support in a negative manner when interacting with their husbands, and this behavior resulted in increased subsequent marital stress. The indirect pathway showed that wives with higher levels of dysphoria expected interactions with their husbands to be relatively negative or unsupportive. Their expectations tended to be associated with soliciting, receiving, and providing more negative support when interacting with their husbands, and their behaviors were in turn associated with increased subsequent marital stress. These results are thus the first to identify a clear behavioral mechanism through which dysphoric women generate stress and are the first to do so on the basis of observational and interview data.

The results for husbands revealed a different set of processes than those found for wives. First, it appears that husbands' de-

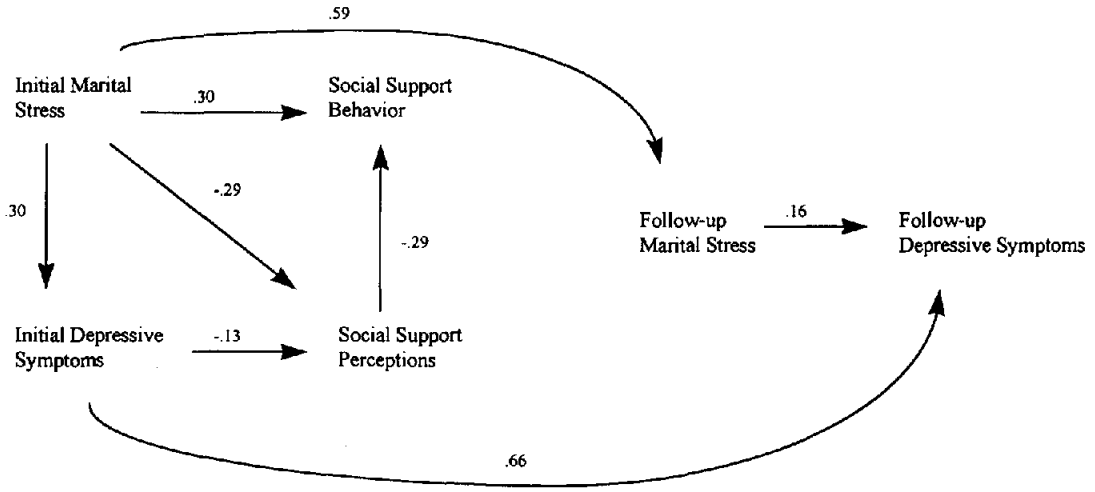

Figure 3. Pattern of results for within-spouse model for husbands, including negative social support behavior. Only significant paths are shown ($p < .05$, one-tailed).

pressive symptoms and marital stress are quite stable over the first 12–18 months of marriage.[9] Nevertheless, consistent with previous findings regarding the relation between stress and depressive symptoms (e.g., Brown & Harris, 1978; Kendler et al., 1995), husbands' marital stress was associated with subsequent depressive symptoms and did predict changes in depressive symptoms over time. Additionally, consistent with the idea that depressed people have negative cognitions (Beck, 1967), husbands' initial depressive symptoms were associated with negative social support perceptions. Husbands' initial marital stress was also associated with social support perceptions and with positive and negative social support behavior. However, for husbands there was no evidence of stress generation, nor were there effects of perceptions or behavior on subsequent marital stress. Thus, among newlywed husbands, marital factors appear to be more consistent predictors of social support processes than is dysphoric mood, but social support processes do not appear to predict future marital dysfunction. Regarding differences between husbands' and wives' models, it should be noted that statistical comparisons of husbands' and wives' data were not made.[10] This does not rule out the possibility that differences between wives' and husbands' models reflect important gender differences. These untested differences should, however, be regarded with caution.

Implications and Future Research

The results of this investigation have implications for the study of marital discord and depression and for the study of stress generation broadly defined. First, the present data suggest that social support processes play an important role in the marital stress generation process. Marital researchers and therapists are increasingly recognizing that social support processes, particularly support behaviors, are critical to the well-being of the marriage and the individual spouses (e.g., Christensen, Jacobson, & Babcock, 1995; Cutrona et al., 1990; Gotlib & Beach, 1995; Pasch & Bradbury, in press; Pasch et al., in press). The present findings underscore this view, especially for wives. Future research should be directed at further specifying the types of social support processes and interactions that most affect marital functioning and depressive symptoms. The present findings suggest that it might be particularly important to continue to focus on both support perceptions and support behaviors and the relation between them.

Second, these findings highlight the importance of considering multiple mechanisms and pathways through which dysphoric people generate stress. Including only support perceptions or support behavior in the model might have led to misleading results. The present findings suggest that, although support behavior acted as a direct mechanism of marital stress generation, support perceptions also were implicated in the process. Dysphoric wives generated marital stress through the impact of their expectations on their behavior. This type of process is consistent with findings in the marital literature that show that the attributions spouses make for their partners' behavior are associated with spouses' behavior in problem-solving interactions (e.g., Bradbury & Fincham, 1992). The results thus suggest that it is important to consider various types of potential stress generators (e.g., cognitive factors, behavioral factors) and how they may affect one another (e.g., mediating effects, moderating effects).

The present findings also suggest that gender differences in the marital stress generation process may exist. Past tests of the stress generation model have examined only women (e.g., Davila et al., 1995; Hammen, 1991; Pianta & Egeland, 1994) or have collapsed men and women into one group (e.g., Pothoff et

[9] We computed the theoretical upper limit of this association to determine if there was room for predicting change in the husbands' BDI scores. The estimate was .80, suggesting that predicting change was possible.

[10] Statistical comparisons could not be made because there are currently no methods available to handle comparisons of nonindependent data when specifying separate causal models for husbands and wives.

al., 1995). However, doing so may obscure potentially important differences. The present findings suggest two possible gender differences. First, although wives' depressive symptoms appear to generate marital stress, husbands' symptoms do not. Second, husbands' social support processes do not appear to be related to their future marital stress. One explanation of the latter finding rests on the idea that husbands are less affected by various aspects of the marriage than are wives (e.g., Floyd & Markman, 1983). In particular, it has been suggested that, compared with husbands, wives' psychological health is more closely tied to marital satisfaction (e.g., Levenson, Carstensen, & Gottman, 1993), and emotional and supportive aspects of the marital relationship matter more to wives' marital satisfaction and psychological health (e.g., Acitelli & Antonucci, 1994; Julien & Markman, 1991). Thus, social support processes may be much less likely to affect husbands' marital stress than wives'. The same gender differences have not emerged for the association between marital satisfaction and problem-solving or conflict resolution (see Karney & Bradbury, 1995). Interactions of this sort might thus play a role in marital stress generation for husbands.

The question remains, why is it that husbands' depressive symptoms are not associated with their subsequent marital stress levels? There is some evidence that suggests that to the extent that newlywed husbands are dysphoric, wives will provide them with more emotional support (Pasch, Bradbury, & Davila, in press). Although this was not evident in the present findings, perhaps because husbands in the present sample had lower mean BDI scores than husbands in Pasch et al.'s (in press) sample, it does suggest that husbands may not generate marital stress because their wives respond positively to them when they are dysphoric. It is also possible that marital stress generation processes might be evident only in husbands who are more depressed or who are at a different stage in their marriage. Regarding the latter, Coyne (1976) suggested that the interpersonal rejection elicited by depressed individuals emerges over time. Specifically, people may initially be supportive of the depressed person but eventually become impatient, irritated, and rejecting. Thus, stress generation may be more evident later in marriage, after spouses have had a chance to become "impatient." In fact, Fincham, Beach, Harold, and Osborne (in press) did find that depressive symptoms predicted marital satisfaction for men and that the time lag for this effect to emerge was longer than the time lag for the emergence of the effect of satisfaction on depression. In addition, consistent with the view that stress generation may be evident only in more dysphoric husbands, the participants in Fincham et al.'s study evidenced slightly higher mean BDI scores than did the present sample.

Coyne's (1976) notion of a delayed onset of interpersonal rejection may also explain why depressive symptoms were not associated with cross-spouse support processes. Maybe such associations are evident only after couples have been married for some time and marital satisfaction has declined or the spouses have had continued exposure to the symptoms and their associated behaviors.

An important direction for future research is thus the continued investigation of the role of spouses in marital stress generation and, more broadly, the role of others (e.g., family members) in the stress generation process. It has been suggested that the study of marital functioning and psychopathology must proceed by examining the roles and behaviors of all relevant parties, not just the dysphoric person (e.g., Lee & Gotlib, 1994). This study was an initial attempt to identify cross-spouse effects in marital stress generation, but none were evident. It was one's own social support perceptions and behavior, rather than one's spouse's support perceptions and behavior, that were associated with depressive symptoms and subsequent stress. Still, there is likely to be a high degree of reciprocity between spouses' and their partners' behaviors, suggesting that both may be implicated in the association between marital discord and depression. For example, studies have shown that negative reciprocity that occurs between spouses during problem-solving interactions is associated with marital discord (see Weiss & Heyman, 1990b). In addition, negative reciprocity during social support interactions is associated with husbands' depressive symptoms (Pasch et al., in press). Analyses of this sort might shed light on more specific interactional patterns that mediate marital stress generation.

Limitations and Conclusion

There are a number of limitations of the present study that must be noted. One limitation is that participants experienced low levels of depressive symptoms during the course of the study. Clearly, the predictions need to be tested in samples with more significant levels of depression and with additional measures of depression (e.g., clinical interviews). However, this study was designed to be an application of the stress generation model to depressive symptoms in the marital context. The goal was to provide a model for conceptualizing the association and course of depressive symptoms and marital dysfunction. Thus, despite the low level of symptoms in the present sample, we believe this study provides useful information about important marital processes. In addition, the study provides a conservative test of the associations between depressive symptoms and stress, particularly of the association between initial symptoms and subsequent stress, given that participants began the study relatively asymptomatic (see Monroe et al., 1986). The existence of predicted associations among dysphoria, negative social support processes, and marital stress suggests that we may be seeing the beginnings of what may be a destructive, cyclical process as the marriage goes on, particularly for wives. This is not to say that depressive symptoms and stress will necessarily continue to be associated in a purely linear fashion, but the existence of such associations so early on may put women at risk for future symptoms, marital discord, or both. Beach et al. (1993) reached a similar conclusion on the basis of their findings that subclinical levels of depression are related to decrements in social role functioning. Wells et al. (1989; Wells, Burnam, Rogers, Hays, & Camp, 1992) also found that people with subclinical levels of depression have substantial limitations in functioning and are at risk for future depression. Of course, because the processes that characterize early marriage may be different than those characterizing later marriage, continued investigation of these processes at various stages of marriage is warranted.

Another potential limitation of the study is that episodic event stress was not assessed. Past studies of stress generation have focused on episodic events alone (e.g., Pothoff et al., 1995) or in conjunction with chronic stress (Davila et al., 1995). On the

basis of the present study we cannot make any conclusions regarding the extent to which dysphoria and social support processes affect specific marital events.

It should also be noted that, although collected from public records, our sample was relatively highly educated and, on the basis of their demographic profile, likely to be at lower risk for marital difficulties than other samples recruited with media advertisements (see Karney et al., 1995). Thus, the findings may not generalize to other samples of newlyweds, although this sample may have provided a conservative estimate of the associations based on their lower risk status.

Finally, the stress generation model portrays how depressive symptoms are maintained or exacerbated. It was designed to help explain why depressive symptoms recur and to illustrate how dysphoric individuals shape their environments. However, there are a number of questions that the model, and existing research on the model, do not address. First is the question of whether stress generation is specific to depression. Although it is clear that depressive symptoms lead to stress generation, there might be other psychopathology or personality variables that also do so (see Daley et al., 1997). One possible variable is the personality trait of negative affectivity. Depressive symptoms are considered to be one indicator of negative affectivity, and negative affectivity has been shown to be a predictor of marital dissatisfaction and instability (e.g., Karney & Bradbury, 1995). Thus, people high on negative affectivity may also contribute to the occurrence of marital stress or interpersonal stress more broadly defined. A second unaddressed question asks what leads to reductions in symptoms, or, how does one break the vicious cycle of stress generation? The implication in the stress generation model is that positive changes in the individual's interpersonal behavior will facilitate reduced stress and depressive symptoms, but the details of how interactional patterns might assist in this process are not specified. Clearly, much more research is needed to identify how marital factors both increase and decrease the maintenance and worsening of depressive symptoms.

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