Interpersonal Predictors of Stress Generation

Nicole K. Eberhart and Constance L. Hammen

Pers Soc Psychol Bull 2009; 35; 544 originally published online Jan 26, 2009;
DOI: 10.1177/0146167208329857

Interpersonal Predictors of Stress Generation

Nicole K. Eberhart
Constance L. Hammen
University of California-Los Angeles

Hammen (1991) provided evidence for a stress generation process in which individuals with a history of depression contributed to the occurrence of stressors, especially interpersonal and conflict events. However, few studies have examined the factors contributing to stress generation. This study examines aspects of individuals' interpersonal style, operationalized as attachment, dependency, and reassurance seeking, as predictors of conflict stress generation within romantic relationships. These effects were examined both prospectively over a 4-week period and cross-sectionally using a 14-day daily diary in a sample of female college students. Overall, there was significant evidence that interpersonal style contributes to the occurrence of interpersonal stressors. Specifically, anxious attachment and reassurance seeking prospectively predicted romantic conflict stress over a 4-week period, and a variety of interpersonal behaviors were associated with romantic conflict stressors on a daily basis. These results are interpreted in relation to previous literature, and limitations and directions for future research are discussed.

Keywords: *stress; interpersonal style; attachment; dependency; reassurance seeking*

A large body of stress research has focused on how individuals' responses to stress make them susceptible to psychological disorders (e.g., see Hammen, 2005; Moore & Burrows, 1996; Paykel, 2003; and Rabkin, 1993, for reviews). Much of this research is from the vantage point of diathesis-stress models, which examine how individuals' personal vulnerabilities affect their response to stressors. However, this model of stress has been criticized for its implicit assumption that individuals are passive recipients of stressors (e.g., Hammen, 1991; Hankin & Abramson, 2001). There is growing recognition that while environmental factors such as life stressors affect individuals, individuals also reciprocally affect their own environments. One key way in which individuals affect their own environments is through a process called *stress generation* (Hammen, 1991).

Hammen (1991) coined the term *stress generation* in her study in which she found that depressed women experienced higher levels of stressful life events that were caused in part by the individuals, as compared to women with chronic medical illness, bipolar disorder, and healthy controls. This effect was especially evident for stressors involving interpersonal conflict, and has been replicated in a number of studies (e.g., Chun, Cronkite, & Moos, 2004; Cui & Vaillant, 1997; Davila, Bradbury, Cohan, & Tochluk, 1997; Davila, Hammen, Burge, Paley, & Daley, 1995; Hammen & Brennan, 2001, 2002; Harkness & Luther, 2001; Harkness, Monroe, Simons, & Thase, 1999; Pianta & Egeland, 1994; Potthoff, Holahan, & Joiner, 1995).

Although stress generation has been associated with depressive diagnoses, that does not mean that the depression is the only factor leading to increased generation of stressors. Indeed, there is evidence that individuals with a history of depression contribute to generation of stressors even when they are not currently in a depressive episode (Daley et al., 1997; Hammen, 1991; Hammen & Brennan, 2002; Kessler & Magee, 1993). This finding suggests that depression alone cannot explain stress

Authors' Note: This article is based in part on the doctoral dissertation of Nicole Eberhart, chaired by Constance Hammen. The research was supported in part by a National Research Service Award postdoctoral fellowship (NIMH Grant 5-T32-MH14584) awarded to Nicole Eberhart. We are grateful to Denise Bowen, Nicole Connolly, Caitlin Ferriter, Danielle Keenan Miller, Leslie Yan Meier, Paige Mission, Jennifer Reynolds, and Leila Sadeghi for their assistance in data collection and to Carol Aneshensel, Thomas Bradbury, Shelly Gable, Letitia Anne Peplau, and Josephine Shih for consulting on this project. Correspondence concerning this article should be addressed to Nicole Eberhart, Department of Psychology, 1285 Franz Hall, University of California, Los Angeles, CA 90095-1563; e-mail: eberhart@psych.ucla.edu.

PSPB, Vol. 35 No. 5, May 2009 544-556
DOI: 10.1177/0146167208329857

generation. As such, Hammen (1991) and others have hypothesized that it is not just the depressive episode, per se, that contributes to stress generation. Rather, factors such as the personal characteristics and behaviors of individuals with a history of depression, in addition to the context of their lives, likely contribute to their elevated levels of stress generation. However, surprisingly few studies have actually examined the factors that cause individuals to contribute to stressors in their own lives above and beyond the effects of depression itself. As such, this study examines factors that are associated with stress generation even when depressive symptoms are controlled.

There are likely a wide variety of factors that contribute to an individual's tendency to contribute to stressors. However, given that stress generation findings have been strongest for interpersonal stressors (e.g., Daley et al., 1997; Hammen, 1991), interpersonal style variables seem to be likely candidates for contributors to stress generation. Thus, this study focuses on three interpersonal style variables that have been empirically linked to life stress: insecure attachment orientation, dependency/sociotropy, and reassurance seeking.

Building on the attachment theory put forth by Bowlby (1969, 1973, 1980), Hazan and Shaver (1987, 1994; Shaver & Hazan, 1987, 1988) argued that the attachment style developed in childhood persists into adulthood and is applied to adult romantic relationships. Whereas early research on adult romantic attachment used a categorical approach, there has recently been consensus to view attachment not as distinct prototypes but as two dimensions: anxious attachment and avoidant attachment (e.g., Brennan, Clark, & Shaver, 1998). Anxious attachment is characterized by concerns about rejection and abandonment, whereas avoidant attachment is characterized by discomfort being close to and depending on others. Conceptually, there is reason to believe that attachment orientation may influence interpersonal stress generation. For instance, a person who is high on the anxious attachment dimension and fears abandonment may consequently exhibit needy or demanding behaviors. These behaviors may be bothersome to others, particularly a romantic partner, and thus may lead to stressful conflict events.

A number of studies have examined the ways in which attachment orientation affects response to interpersonal stressors, including coping and conflict resolution and/or management (e.g., Bippus & Rollin, 2003; Campbell, Simpson, Kashy, & Rholes, 2001; Creasey, 2002; Simpson, Rholes, & Phillips, 1996). Many studies have focused on the role of attachment in response to romantic stressors in particular (see Feeney, 2004, for a review). However, there is little available research on the relationship between attachment orientation and exposure to stressors. Koopman et al. (2000) found that less secure and more anxious romantic attachment styles were associated with higher levels of perceived stress among HIV-positive individuals, but this study is difficult to interpret because it measured subjective appraisals of stress rather than objective exposure to stressors and did not distinguish between interpersonal and noninterpersonal stress. Only two studies have prospectively examined the relationship between attachment and stress generation among adults and made the key distinction between types of stressors. In a college student sample, Hankin, Kassel, and Abela (2005) found that anxious and avoidant attachment orientations prospectively predicted interpersonal stressors, but not achievement stressors, over a 2-year period. In a clinical sample of adults receiving treatment for depression, Bottonari, Roberts, Kelly, Kashdan and Ciesla (2007) likewise found that these attachment dimensions predicted dependent and interpersonal life events but not independent or achievement-related events.

Similar to attachment orientation, there are conceptual reasons to believe that dependency or sociotropy, two highly similar constructs (e.g., Alden & Bieling, 1996) characterized by a high level of investment in interpersonal relationships, may be associated with stress generation. Theoretically, individuals high in sociotropy or dependency may demand increased emotional support and closeness from relationships, which may lead to stressful life events, particularly conflict stressors, as others may not be willing or able to meet the individual's needs. In support of this theory, evidence from cross-sectional studies suggests that sociotropy or dependency is correlated with occurrence of stressful life events, particularly negative interpersonal events. For instance, adolescents high in neediness and relatedness—two dimensions of dependency—reported higher levels of negative life events (Shahar, Henrich, Blatt, Ryan, & Little, 2003). Furthermore, college students high in sociotropy reported marginally more interpersonal life events (Robins, 1990). Depressed patients high in sociotropy or dependency also reported more stressors (Zaretsky, Fava, Davidson, & Pava, 1997), especially interpersonal stressors (Robins, 1990).

Prospective studies of dependency and stress reveal a less consistent pattern of results. Studies of adolescents have found that dependency predicts reports of stressful life events several weeks later (Shahar & Priel, 2003), including romantic stressors in particular (Mongrain & Zuroff, 1994). However, prospective studies of college students have suggested that dependency does not predict occurrence of stressors (Shahar, Joiner, Zuroff, & Blatt, 2004), particularly when other key variables are controlled for (Priel & Shahar, 2000). It should be noted that most studies of dependency do not distinguish

between different types of stress in their analyses. In contrast, Daley et al. (1997) made this distinction and found that sociotropy predicted occurrence of dependent stressors (stressors to which the individual contributed) and, more specifically, stressors involving interpersonal conflict over a 1.5-year period. However, sociotropy no longer predicted these stressors once participants' psychiatric diagnoses were controlled for statistically. Furthermore, sociotropy did not predict noninterpersonal stressors. These results highlight the importance of examining dependent interpersonal stress in particular, and they suggest that the effects of interpersonal style on stress may be confounded with the effects of psychopathology. As such, more studies that take into account these factors are needed.

Reassurance seeking, in which individuals seek feedback from others as to whether they truly care, may be conceptually related to stress generation in that excessive efforts to check on the relationship may annoy and frustrate others, eliciting not only interpersonal rejection (Coyne, 1976) but also conflict in the close relationships. Few studies have actually examined reassurance seeking as a predictor of occurrence of stressors, but the available research has found evidence of a prospective relationship between reassurance seeking and stress generation in samples of college students, especially with respect to interpersonal stressors (Potthoff et al., 1995; Shahar et al., 2004).

In sum, the majority of stress studies focus on response to stressors rather than factors contributing to occurrence of stressors. The studies reviewed above are unique in acknowledging that individuals contribute to the stressors they experience. However, more studies are needed to replicate these findings. In addition, the existent research has some key limitations. To begin, most studies used generalized measures of interpersonal style (i.e., overall measures of attachment dimensions, dependency, and reassurance seeking). These general interpersonal style constructs are likely associated with specific behavioral indicators that are evident on a day-to-day basis. However, the effects of such daily interpersonal behaviors have not been examined. To address this gap in the literature, this study conducted daily assessments of specific interpersonal behaviors and conflict stressors. Conceptually, this approach enabled a micro-level analysis of the effects because it enabled us to determine the relationship between specific interpersonal behaviors and stress generation processes within a single day. From a methodological point of view, the daily diary method is also more reliable in that it asks individuals to report what they did that day rather then requiring them to generalize about their own behavior over a longer period of time, which may introduce memory biases related to individuals' self-concepts.

Furthermore, most previous research has exclusively relied on self-report checklists of life events. Although self-report and interview measures of stress are highly correlated among children and adolescents (Lewinsohn, Joiner, & Rohde, 2001; Wagner, Abela, & Brozina, 2006), self-report stress measures are limited in that participants may make idiosyncratic interpretations of what qualifies as a life event and provide subjective appraisals of stressor severity. Moreover, self-report checklists may be affected by subjects' personality and mood to a greater extent than interviews (see Duggal et al., 2000; McCrae, 1990; McQuaid, Monroe, Roberts, Kupfer, & Frank, 2000; Simons, Angell, Monroe, & Thase, 1993, for reviews; see Wagner et al., 2006, for an exception). In contrast, this study had participants report life events on a daily basis, which reduces errors in recalling events (Reis & Gable, 2001), followed with a semistructured interview that contextualized stressors in participants' lives and provided the basis for objective ratings of stress severity by independent judges.

Some studies have also aggregated diverse kinds of stressors, such as interpersonal and noninterpersonal events. Given evidence that interpersonal style may be associated with specific types of stressors (e.g., Daley et al., 1997), this study focuses on the specific domain of dependent, romantic conflict stressors. It focuses on romantic relationships in particular because forming intimate relationships is a major developmental task for young adults (e.g., Bowlby, 1988; Erikson, 1950). From a methodological perspective, focusing on a single key relationship ensured that every individual in the study had equal opportunity to generate conflict stressors; in other words, it prevented the problem of certain individuals reported more stressors simply because they had more relationships in which stressors might occur.

In addition, most previous studies did not exclude individuals with current depression. This is an important consideration because currently depressed individuals tend to have inflated scores on certain measures of interpersonal style (Coyne & Whiffen, 1995). Moreover, the effect of interpersonal style on stress generation may be confounded with the effect of psychopathology (Daley et al., 1997). As such, this study excluded individuals who met diagnostic criteria for current disorders and controlled for current depressive symptomatology. This enabled us to examine interpersonal variables that predict stress generation above and beyond the effects of depression. The study also restricted its sample to women because females are more susceptible to interpersonal stressors (Shih, Eberhart, & Hammen, 2006). It was restricted to individuals involved in a romantic relationship to ensure that all participants shared a similar context in which stressful life events may occur.

It was hypothesized that aspects of interpersonal style, including attachment, reassurance seeking, and dependency, would predict generation of higher levels of conflict stressors, controlling for the effects of baseline depressive symptoms. This hypothesis was examined in two different ways: prospectively, using baseline measures of relatively stable interpersonal traits, and cross-sectionally, using daily reports of specific interpersonal behaviors related to the interpersonal traits.

METHOD

Participants

The initial sample consisted of 113 women recruited from introductory psychology classes in partial fulfillment of course requirements. Of the initial 113, 4 were eliminated from the study because of current depression or anxiety diagnoses (described below), 2 were excluded from analyses because they reported less than daily contact with their romantic partner, and 3 dropped out of the study, yielding a final sample of 104 women. All members of the final sample were currently involved in a romantic relationship, with a mean relationship length of 18.55 months (SD = 16.13). All had daily contact with their romantic partner. None met diagnostic criteria for current depressive, anxiety, or eating disorder. Their ages ranged from 17 to 23, with a mean age of 18.82 (SD = 1.24). They were ethnically and racially diverse, with 35.6% Asian, 27.9% Caucasian, 9.6% Hispanic or Latina, 4.8% African American, 4.8% Hawaiian or Pacific Islander, and 17.3% Biracial. Income information was available for 95 of the 104 women. The sample was socioeconomically diverse as well, as 40% had family incomes of less than $60,000.

Procedure

Participants were initially assessed in a mass pretesting session as part of their introductory psychology course. During this session, they were administered a brief prescreening questionnaire. Participants who meet all selection criteria (i.e., no current depression or anxiety, daily contact with a romantic partner) were contacted by phone and/or e-mail and invited to participate in the study.

Participants attended an individual, in-person meeting in which they gave written, informed consent to participate in the study. They were then administered a diagnostic interview. Participants who met diagnostic criteria for current depressive or anxiety disorders were excluded from the study and offered contact information for Student Psychological Services. Participants who were not excluded after the diagnostic interview completed a battery of questionnaires, including measures of depressive symptoms and interpersonal style. During this baseline session, they also received instruction on how to complete a daily diary online, and they practiced accessing the online questionnaires.

Participants completed the daily diary online every evening for 14 consecutive days. They were instructed to complete the diary at the end of the day, after 9 p.m. They were e-mailed a link to the survey at 9 p.m. every day to remind them to complete the diary that evening. The next morning, the experimenter checked if participants completed the diary the prior evening. If they failed to complete an assessment, they were e-mailed another reminder in the morning and given the opportunity to complete the assessment as soon as possible that day based on their experiences the previous day, but no later than noon. The surveys were only available for completion between 9 p.m. and noon the following day to ensure that the questionnaires were completed at the appropriate time.

After 3 weeks, participants were contacted by phone to schedule a second in-person meeting for the 4th week of the study. During the second meeting, participants were administered a romantic life stress interview.

Measures

Screening questionnaire. During a mass pretesting session for the University of California–Los Angeles's introductory psychology course, potential participants completed a brief questionnaire assessing demographic information, involvement in a romantic relationship, frequency of contact with romantic partner, and current depression.

Structured Clinical Interview for DSM-IV Axis I Disorders, Clinician Version (SCID-1-CV). Selected modules of the SCID (First, Spitzer, Gibbon, & Williams, 1996) were used to diagnose current depressive, anxiety, and eating disorders at baseline for the purpose of excluding individuals with current psychopathology. Whereas depression was of primary interest, anxiety and eating disorders were also assessed because they are common comorbid diagnoses. The SCID has good psychometric properties, comparable to those of other diagnostic interviews (First et al., 1996). Of the initial sample of 113 participants, 4 were excluded because of current psychiatric diagnoses.

A subset (n = 43) of the SCID interviews were audiotaped to assess interrater reliability, but kappas could not be computed because for each diagnostic category one rater made zero diagnoses, and kappa cannot be computed when one variable is a constant. However, the first and second raters never disagreed on more than one diagnosis, over 43 cases.

Beck Depression Inventory–2nd Edition (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) was used to measure severity of participants' depressive symptoms at baseline and 4-week follow-up. The measure consists of 21 items, each of which is rated on a 4-point scale from 0 to 3, with a possible range from 0 to 63. Higher scores indicate greater symptom severity. The BDI-II was revised to more closely reflect DSM-IV diagnostic criteria for a depressive episode, which served to increase its content validity. It has convergent validity with the original BDI, test-retest reliability of .93 over 1 week among outpatients, and internal consistency of .93 in a college student sample. In this study, the measure's internal consistency (Cronbach's α) was .86.

Experiences in Close Relationships–Revised (ECR-R). Attachment dimensions were measured using the ECR-R (Fraley, Waller, & Brennan, 2000). This self-report questionnaire consists of two 18-item subscales: Avoidance (or Discomfort With Closeness and Discomfort With Depending on Others) and Anxiety (or Fear of Rejection and Abandonment). The ECR-R was generated using IRT analyses of commonly used attachment scales, yielding a scale with improved psychometric properties, including high internal consistency and a better distributed range of trait scores (Fraley et al., 2000). Exploratory and confirmatory factor analyses have confirmed the validity of the measure (Sibley & Liu, 2004). In addition, the measure has very good stability; latent variable path analyses indicated that 86% of the variance was shared between measurements 6 weeks apart (Sibley & Liu, 2004). In this study, the internal consistency was .95 for the Avoidance subscale and .91 for the Anxiety subscale.

Excessive Reassurance Seeking Scale. This 4-item scale (Joiner, Alfano, & Metalsky, 1992, 1993) measures the tendency to seek feedback from others as to whether they truly care about the subject. For example, one item asks, "Do you frequently seek reassurance from the people you feel close to as to whether they really care about you?" with response choices from 1 (*not at all*) to 7 (*very much*). Ratings are summed across the 4 items to yield scores ranging from 4 to 28, with higher scores indicating higher levels of reassurance seeking. The scale has been shown to have good criterion and construct validity, including discriminant validity from dependency and negative affectivity, and predictive validity of actual reassurance seeking behaviors (Joiner, 1994; Joiner et al., 1992, 1993; Joiner & Metalsky, 1995; Potthoff et al., 1995). In studies by Joiner and colleagues, internal consistency has ranged from .85 to .95. In this study, the internal consistency was .86.

3 Vector Dependency Inventory. Dependency was measured using the 3 Vector Dependency Inventory (Pincus & Wilson, 2001). Two of the three dimensions, exploitable dependence and love dependence (9 items each), were measured. Exploitable dependence captures suggestibility and eagerness to please others, whereas love dependence captures interpersonal sensitivity and affiliative behavior. Participants rated how well each statement described them on a 6-point scale from 1 (*not at all like me*) to 6 (*very much like me*). The authors created an initial version of the measure by conducting structural analyses on a large item pool created using several widely used measures of dependency, including the Depressive Experiences Questionnaire (Blatt, Quinlan, & D'Afflitti, 1976) and the Sociotropy-Autonomy Scale (Beck, Epstein, Harrison, & Emery, 1983). The validity of the subscale structure has been confirmed using factor analysis, and the measure has been shown to have convergent validity with measures of attachment, parental representations, and loneliness. The subscales have adequate internal consistency in two samples, with alphas from .83 to .85 for exploitable dependence and .75 to .79 for love dependence (Pincus & Wilson, 2001). The measure was altered for this study so that items referred to behaviors in romantic relationships rather than friendships. Using the altered version of the questionnaire, internal consistency (Cronbach's α) was .85 for the Exploitable Dependence subscale and .82 for the Love Dependence subscale.

Daily diary. Every evening (after 9 p.m.), participants completed a brief questionnaire online. The measure was completed at the end of the day so that participants could report on behaviors and stressors that had occurred earlier that same day. The diary consisted of the following components:

1. Interpersonal style questionnaire. Daily manifestations of attachment dimensions, dependency, and reassurance seeking were assessed by selecting and modifying items from original measures of these constructs (i.e., Fraley et al., 2000; Joiner et al., 1992, 1993; Pincus & Wilson, 2001). The resultant interpersonal style questionnaire assessed the frequency of specific daily interpersonal behaviors associated with the interpersonal style variables. The items chosen from the original measures were selected because they had the best-performing (i.e., items with the highest factor loadings or α discrimination values from IRT analyses) and/or were the most behavioral, as they were meant to serve as specific behavioral examples of the interpersonal style constructs. As such, the daily diary items were altered from the original items to indicate specific behaviors that occurred that day within the romantic relationship. For instance, an original anxious attachment item was, "I often worry that my partner will not want to stay with me." For the purpose of

the daily diary, it was slightly modified to be specific to what had happened that day: "I worried that my partner will not want to stay with me." Similarly, an example of a daily avoidant attachment item is, "It was hard for me to be affectionate with my partner." Whereas the attachment items were already specific to partners, the dependency, and reassurance seeking items needed additional alteration to be specific to the romantic relationship. For instance, an original love dependency item was, "I find it difficult to be separated from the people I love"; was was altered to, "I found it difficult to be separated from my partner." Similarly, an exploitable dependency item is, "I did something I did not want to do in order to please my romantic partner." An item representing reassurance seeking is, "I found myself asking my romantic partner how he or she *truly* feels about me."

Whereas the original items taken from questionnaires were on Likert-type scales, for the daily diary, participants were simply told, "Think about the experiences you have had in your relationship TODAY. For each item, please choose and check off YES if you had the experience today, or NO if you did not." The instructions further indicated that participants should not share their answers with their partner and should try not to change their behavior in any way over the course of the study. Internal consistency for these daily interpersonal behavior scales was adequate, given the low number of items in each scale. Cronbach's alpha was computed for each of the 14 days of the study and averaged across the days. Mean alpha was .65 for anxious attachment behaviors (2 items), .68 for avoidant attachment behaviors (4 items), .64 for love dependency behaviors (3 items), and .71 for reassurance seeking behaviors (2 items). Exploitable dependency was not examined in the daily analyses because the daily measure of this construct did not have adequate internal consistency, $\alpha = .32$ (4 items).

2. Romantic life events questionnaire. Participants completed a self-report checklist specifically targeting stressors in the romantic relationship that occurred that day. The checklist was constructed by adapting romantic items from the Negative Life Events Questionnaire (Saxe & Abramson, 1987), a life events checklist developed to assess stressors typically experienced by college students. Extra items were added to more thoroughly assess conflict in relationships for a total of 20 items. A sample item is, "Had a significant fight or argument with romantic partner that led to serious consequence(s) such as self or romantic partner crying, leaving common residence for one night, etc." Conflict stressors were operationally defined to include minor disagreements as well as major arguments. Frequencies of conflict stressors were tabulated for each day of the daily diary portion of the study.

Romantic life stress interview. The UCLA Life Stress Interview (Hammen et al., 1987; Hammen, Marks, Mayol, & deMayo, 1985) was adapted to measure episodic stressors in romantic relationships. The interview encompassed life events assessed in the 14-day daily diary but covered the full 4 weeks of the study. The interview was modeled after Brown's contextual threat assessment of stressful life events (Brown & Harris, 1978). Whereas the daily diary described above only measured stressor frequency, the interview measure of stressors took into account both frequency and objective severity in the conflict stress composite scores. Interviewers first asked participants to spontaneously identify events during the 4-week study period. Then specific probes were used to jog their memory of specific types of events. Finally, interviewers queried participants about events listed in their daily diary that they had not already mentioned. The semistructured format of the interview allowed probing of each potential event so that sufficient information was obtained about the nature and consequences of the events and the circumstances surrounding their occurrence. The interviewer wrote a narrative of each event, which was later presented to a rating team that was blind to the participant's reaction to the event. The team then rated each event on three dimensions:

1. Objective impact: The team rated each event on a 5-point severity scale that measures the impact the event would have on a typical person in a similar context, where 1 indicates no negative impact and 5 indicates a severe negative impact. Hammen (1991) has provided evidence for the reliability and predictive validity of this methodology.
2. Independence: The team rated each event for independence, the degree to which the event was dependent on the actions of the participant. The events were coded on a 5-point scale, where 1 indicates that the event was entirely fateful, 3 indicates that the event was at least partially due to actions of the individual, and 5 indicates that the event was entirely due to the individual's actions. Events rated 3 or higher were considered dependent. Because romantic stressors involve two people almost by definition, it was expected that the vast majority of stressors would be considered dependent in this study.
3. Conflict content: The team determined whether each event predominately involved conflict with the romantic partner. A conflict stressor was operationally defined as any incident in which there is significant disagreement between partners or when one partner expressed frustration with the other. As such, conflict stressors included minor disagreements as well as major arguments.

Composite scores for romantic conflict stressors were computed by summing severity ratings for all events coded as both dependent and conflict. Interrater reliabilities were determined for objective impact, independence, and conflict by presenting the same events to two different rating teams and computing intraclass correlations ($n = 47$ events). Intraclass correlation coefficients were .98 for objective impact and .96 for independence. Kappa was 1.00 for conflict, indicating no disagreement between rating teams.

TABLE 1: Means, Standard Deviations, and Pearson Correlations for All Study Variables

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. Baseline Beck Depression Inventory	—	.41**	.10	.19	.34**	.19*	.18	.06	.20*	.15	.22*	.19
2. Baseline anxious attachment		—	.40**	.47**	.49**	.17	.32**	.23*	.23*	.28**	.19	.32**
3. Baseline avoidant attachment			—	.14	.01	–.27**	.16	.27*	.23*	.30**	.11	.31**
4. Baseline reassurance seeking				—	.19	.23*	.30**	.14	.19	.40**	.20*	.34**
5. Baseline exploitable dependency					—	.43**	.15	.04	–.01	–.02	.00	.00
6. Baseline love dependency						—	–.08	.02	–.13	–.05	.09	–.08
7. Conflict stress over 4 weeks							—	.27**	.55**	.36**	.07	.62**
8. Daily anxious attachment behaviors								—	.33**	.40**	.29**	.35**
9. Daily avoidant attachment behaviors									—	.36**	.17	.63**
10. Daily reassurance-seeking behaviors										—	.38**	.51**
11. Daily love dependency behaviors											—	.16
12. Daily conflict stress												—
Mean	7.38	2.44	2.25	2.25	33.82	41.54	3.96	0.12	0.29	0.25	1.29	1.09
Standard deviation	5.69	1.00	1.06	1.30	9.09	6.57	3.18	0.21	0.39	0.29	0.76	1.12

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

RESULTS

Overview of Analyses

Two different sets of analyses were conducted. First, baseline measures of interpersonal style were used to predict conflict stressors over the course of a 4-week period. Conflict stressors were operationally defined to include both minor and major arguments in participants' romantic relationships, as assessed by the romantic life stress interview. The first approach allowed examination of the prospective relationships between the variables. Hierarchical multiple regression analyses were used to predict levels of conflict stressors over the course of the 4-week study, controlling for baseline BDI in the first step.

Second, the relationships between daily measures of interpersonal behaviors and conflict stressors, as assessed by the daily diary, were examined in a separate set of analyses. This approach was not prospective but rather concurrent. However, it allowed examination of the association between specific kinds of interpersonal behaviors and stress generation within a day, representing a micro-level analysis of the effects. Hierarchical linear modeling (HLM) was used to analyze the daily diary data. A two-level model was used in which Level 1 estimated within-subject differences and Level 2 estimated between-subject differences. On Level 1, the 14 daily assessments were used to estimate regression lines for the association between behaviors and frequency of stressors for each individual. On Level 2, the model estimated how the relationship between behaviors and stressors differs between participants.

Basic statistics were run on all study variables, including means, standard deviations, and Pearson correlations between the variables (see Table 1). For the variables measured daily, the means across the 14 days were used in these descriptive analyses. The correlations between the baseline measures of interpersonal style ranged from .01 (for avoidant attachment and exploitable dependency) to .49 (for anxious attachment and exploitable dependency). For the daily interpersonal behaviors, the intercorrelations ranged from .17 (for avoidant attachment and love dependency behaviors) to .40 (for anxious attachment and reassurance seeking behaviors). Overall, the pattern of correlations suggested that the different measures of interpersonal style and interpersonal behaviors represented related but distinct constructs.

Prospective Results

Separate hierarchical linear regression analyses controlling for baseline BDI were used to individually examine whether each interpersonal vulnerability factor predicted the interview-based conflict stressor composite over a 4-week period. The interpersonal style variables examined included anxious attachment, avoidant attachment, reassurance seeking, exploitable dependency, and love dependency. Results of these analyses are presented in Table 2. Baseline BDI, which was controlled for in the first step of all analyses, was not a significant predictor of conflict stress over the course of the study. Controlling for BDI, anxious attachment significantly predicted conflict stress generation ($B = .94$, $SE = .33$, $t = 2.86$, $p < .01$), accounting for 7% of the variance. The overall model including both baseline BDI and anxious attachment accounted for 11% of the variance in subsequent conflict stress generation. Similarly, reassurance seeking also significantly predicted conflict stress generation ($B = .66$, $SE = .24$, $t = 2.81$, $p < .01$), accounting for 7% of the variance, and the overall model including both baseline BDI and reassurance

TABLE 2: Hierarchical Linear Regression Predicting Conflict Stress From Baseline Interpersonal Style

Variable	*b*	SE	t	R^2 *Change*
Step 1 for all analyses				
Baseline Beck Depression Inventory	.10	.06	1.83	.03
Step 2				
Anxious attachment	.94	.33	2.86**	.07
Overall model			$F = 5.87$**	.11
Avoidant attachment	.43	.29	1.47	.02
Overall model			$F = 2.77$	.05
Reassurance seeking	.66	.24	2.81**	.07
Overall model			$F = 5.72$**	.10
Exploitable dependency	.04	.04	1.04	.01
Overall model			$F = 2.21$	.04
Love dependency	–.06	.05	–1.18	.01
Overall model			$F = 2.37$	.05

NOTE: $df = 2, 100$.
**$p < .01$.

seeking accounted for 11% of the variance in conflict stress. However, avoidant attachment, exploitable dependency, and love dependency did not significantly predict conflict stress generation.

Daily Diary Results

HLM was used to examine the cross-sectional relationship between daily measures of interpersonal style and daily measures of conflict stressor frequency over a 14-day period, controlling for the effects of time and baseline BDI score. A Poisson distribution was used because stress was a count variable with a skewed distribution. The following equations describe the HLM models that were estimated. These analyses were conducted separately for each category of interpersonal behaviors.

$$\text{Level 1: } (\text{Stress}_{ij}) = \beta_{0j} + \beta_{1j}(\text{Time}_{ij} - \text{Time}_{-j}) + \beta_{2j}(\text{Interpersonal Behavior}_{ij} - \text{Interpersonal Behavior}_{-j}) + r_{ij}$$

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \gamma_{01}\text{BDI} + u_{0j}$$

The subscript $_{ij}$ represents the score of person j on day i, and subscript $_{-j}$ represents the group mean for the variable (the individual's mean over 14 days). All Level 1 variables were group-mean centered. For the Level 1 model, β_{0j} is the regression line's intercept. In this instance, it represents the individual's level of stressors at average levels of interpersonal style during the middle of the study. β_{1j} and β_{2j} represent the slopes. In this instance, β_{2j} represents the strength of the relationship between interpersonal style and stressors for each participant. The term r_{ij} represents the independent and normally distributed residuals (i.e., error).

For the Level 2 model, the term γ_{00} represents the intercept of the regression line. The term γ_{01} is the slope. In this instance, γ_{01} represents the effect of baseline BDI on the frequency of conflict stressors, which is being controlled for statistically. The term u_{0j} represents error. The term β_{0j} represents the effect of the interpersonal style variable on conflict stressors, controlling for baseline BDI as well as time. The Level 2 variables were all grand-mean centered. The unit-specific effects were examined, using robust standard errors, for all analyses.

HLM was used to examine the concurrent relationship between daily measures of interpersonal behaviors and daily measures of conflict stressor frequency over a 14-day period, controlling for the effect of baseline mood. The results of these analyses are presented in Table 3. With respect to the covariates, baseline BDI significantly predicted daily conflict stressors (B = .04, *SE* = .02, *t* = 2.29), but there was no relationship between time (i.e., day of the study) and conflict stress. Each of the categories of interpersonal behaviors examined were significantly associated with daily conflict stressors ($p < .01$), including anxious attachment (B = .84, *SE* = .07, *t* = 11.33), avoidant attachment (B = .59, *SE* = .04, *t* = 15.71), reassurance seeking (B = .57, *SE* = .07, *t* = 8.18), and love dependency (B = .20, *SE* = .06, *t* = 3.26) behaviors. For each of the interpersonal behaviors examined, the overall model including the effects of baseline BDI and time was also highly significant ($p < .01$).

DISCUSSION

Whereas a number of studies have provided evidence for a stress generation process in which individuals actively contribute to the stressors they experience (e.g., Chun et al., 2004; Daley et al., 1997; Davila et al., 1997; Hammen, 1991; Hammen & Brennan, 2001, 2002; Harkness & Luther, 2001), relatively few studies have examined the factors that contribute to stress generation. This study aimed to fill a gap in the literature by examining aspects of interpersonal style that may contribute to generation of conflict stress in romantic relationships, both prospectively over a 4-week period as well as on a daily basis.

The prospective analyses were used because they better enabled the study to draw conclusions about the direction of causality between interpersonal factors and stress. Although bidirectional influences are likely, the prospective design demonstrated that interpersonal style

TABLE 3: Hierarchical Linear Modeling Predicting Conflict Stress From Daily Interpersonal Behaviors

Variable	*b*	SE	t	r
Step 1 for all analyses				
Baseline Beck Depression Inventory	.04	.02	2.29*	.22
Time	–.01	.01	–0.65	.06
Step 2				
Anxious attachment	.84	.07	11.33***	.74
Overall model			χ^2 (3) = 152.29***	
Avoidant attachment	.59	.04	15.71***	.84
Overall model			χ^2 (3) = 251.88***	
Reassurance seeking	.57	.07	8.18***	.63
Overall model			χ^2 (3) = 81.69***	
Love dependency	.20	.06	3.26**	.31
Overall model			χ^2 (3) = 15.05**	

NOTE: df = 103. *p < .05. **p < .01. ***p < .001. Time and each interpersonal variable were entered on Level 1 in all analyses, and Beck Depression Inventory was entered on Level 2 of all analyses. Time was entered as a fixed variable, and all other variables were entered as random variables. Effect sizes (Rosnow & Rosenthal, 1996) were computed using the following formula: $r = \sqrt{[t^2 / (t^2 + df)]}$.

measured at baseline predicted stressors that subsequently occurred over a 4-week period. The results indicated that anxious attachment orientation and reassurance seeking behaviors were the only variables that prospectively predicted occurrence of conflict stressors. It seems that interpersonal styles characterized by concerns about rejection and abandonment as well as a tendency to excessively seek feedback from others about the relationship leads individuals to contribute to more stressors in their romantic relationships. This study is one of few to provide evidence that anxious attachment is associated with higher levels of stressful life events (Koopman et al., 2000; McCarthy, Moller, & Fouladi, 2001). Further, to our knowledge this study is only the second to date to demonstrate a prospective relationship between attachment and stress generation in a nonclinical sample of adults (Hankin et al., 2005; Bottonari et al., 2007, reports this finding in a clinically depressed sample). The study also replicates the results of two other studies that found that reassurance seeking prospectively predicts interpersonal stress generation over the course of a few weeks (Potthoff et al., 1995; Shahar et al., 2004). This study also provides new evidence that previous stress generation findings extend to romantic conflict stressors.

It is notable that anxious attachment and reassurance seeking, in particular, prospectively predicted stress generation, as the two variables are similar in that they both reflect worries about relationships. Indeed, it has been suggested that excessive reassurance seeking may simply be an aspect or consequence of an anxious attachment orientation (Brennan & Carnelley, 1999; Davila, 1999). Given the moderate intercorrelation between these two variables and others in this study, future research is needed to examine the independent contributions of various aspects of interpersonal style and personality to stress generation.

Furthermore, this study conducted a more fine-grained analysis of stress generation processes and provided new information that daily interpersonal behaviors are concurrently associated with generation of conflict stressors within the same day over a 14-day period. All categories of interpersonal behaviors examined, including anxious attachment, avoidant attachment, reassurance seeking, and love dependency behaviors, were associated with daily stress generation. This is consistent with previous findings that anxious attachment (Koopman et al., 2000; McCarthy et al., 2001), reassurance seeking (Potthoff et al., 1995; Shahar et al., 2004), and dependency (e.g., Daley et al., 1997; Mongrain & Zuroff, 1994; Robins, 1990; Shahar & Priel, 2003) are associated with occurrence of stressful life events as well as evidence that single (i.e., not daily) measures of problematic interpersonal behaviors are associated with future stress generation (Shih & Eberhart, 2008b). However, to our knowledge this is the first study to demonstrate that these aspects of interpersonal style translate into specific interpersonal behaviors that affect the stressors individuals experience on a daily basis. The results suggest that a wide variety of interpersonal behaviors are associated with daily relational conflict.

Whereas anxious attachment, avoidant attachment, reassurance seeking, and love dependency behaviors were all associated with conflict stress generation in the cross-sectional daily analyses, only anxious attachment and reassurance seeking also prospectively predicted conflict stress generation over a 4-week period. It is possible that the effects of avoidant attachment and love dependency behaviors are fairly immediate and short-lived as compared to the effects of anxious attachment and reassurance seeking, which affect stress generation over longer periods of time. Whereas avoidant attachment and love dependency tap into affiliative behavior and avoidant behavior, respectively, it is notable that anxious attachment and reassurance seeking both tap into worries about relationships; relationship anxiety may be particularly toxic with respect to contributing to future stress generation. Individuals who are high in anxious attachment have a fear of abandonment, which may drive them to exhibit needy or demanding behaviors that are aversive to romantic partners and contribute to events involving conflict within the relationship. Similarly, the excessive tendency to seek feedback from others that is characteristic of reassurance seeking may frustrate romantic partners, resulting in both rejection (Coyne, 1976) and increased conflict within intimate relationships.

However, it is also possible that more daily measures were associated with conflict stressors because they measured specific behaviors, as opposed to the more general constructs used in the prospective analyses. These specific behaviors were more direct measures of participants' daily lives and may be the mechanisms through which interpersonal style affects stress generation. It is also possible that the daily diary analyses were better able to capture significant effects for purely methodological reasons. The daily data included more observations and thus had greater power to detect significant effects. Furthermore, whereas the prospective analyses used both self-report and interview-based measures, the daily measures were both self-report and, thus, may have been more strongly associated because of shared reporting biases.

This study has some notable strengths. It included both prospective data and concurrent daily diary assessments, which enabled examination of the issue from two complementary perspectives. Furthermore, the study avoided relying exclusively on a retrospective self-report checklist of stressful life events (e.g., McQuaid et al., 2000). Moreover, this study excluded individuals with current depressive and anxiety disorders and controlled for current depressive symptoms so that the effects of interpersonal style and current psychopathology would not be confounded (Daley et al., 1997). As such, this study is able to provide new evidence that interpersonal style predicts stress generation even when this possible confound is taken into account.

However, several limitations of the study should be noted. The study's sample consisted of college students, so it is unclear whether the findings would extend to young adults who are not attending college or, further, to individuals of other ages. In addition, the college student sample does not reveal extremes on traits or high numbers of stressors. Future research is needed to determine whether the findings extend to community samples, high-risk samples, and other age groups. Moreover, this study's sample was limited to women. As such, the study's findings may not be applicable to young men, especially in light of evidence that the relationship between interpersonal behaviors and interpersonal stress is different among male and female college students (e.g., Shih & Eberhart, 2008a). More broadly, studies have found evidence of sex differences in stress exposure and reactivity in both adolescents (e.g., Hankin, Mermelstein, & Roesch, 2007; Shih et al., 2006; see Rudolph, 2002, for a review) and adults (e.g., see Mazure & Maciejewski, 2003, and Nolen-Hoeksema, 2001, for reviews), with females reporting more problematic stress experiences, especially with respect to interpersonal stressors. This study's focus on women enabled it to examine predictors of stress generation in individuals who are more likely to be adversely affected by stress. However, the study's entirely female sample prevented it from testing for sex differences in stress generation processes. As such, future research should focus on stress differences in interpersonal predictors of stress generation.

Furthermore, the scope of this study was limited in that it focused on romantic conflict stressors. In some respects, this was a strength of the study, as some previous research has combined diverse types of stress, sometimes not even making the key distinction between interpersonal and noninterpersonal stressors. In addition, forming intimate relationships is a central developmental task for young adults (e.g., Bowlby, 1988; Erikson, 1950), and focusing on one domain ensured that every individual shared a similar context in which conflict stress may occur. However, it is unclear whether the specific findings of this study would extend to other kinds of relationships, such as friendships and family relationships, particularly because previous studies that have provided more global evidence that interpersonal style predicts interpersonal stress largely have not distinguished between stressors in specific relationship domains (e.g., Bottonari et al., 2007; Hankin et al., 2005; Robins, 1990; Shahar et al., 2003; Shahar & Priel, 2003; see Shahar et al., 2004, for an exception). Furthermore, this study also cannot determine which factors may contribute to stress generation in achievement-oriented domains such as school and work. Future research should examine a wide variety of interpersonal and noninterpersonal predictors of stress generation in various interpersonal relationships as well as outside the interpersonal domain.

The prospective analyses examined only a 4-week period. This short follow-up was chosen for pragmatic rather than conceptual reasons, and it limits the conclusions that can be drawn from the study, as the majority of stressors captured over the 4-week period were mild in their severity (e.g., one hour-long argument with partner with no serious consequences), with a low incidence of more highly stressful events (e.g., break-up of romantic relationship). As such, it is unclear whether the results would extend to more serious stressors. Future studies would benefit from using a longer follow-up period to capture more clinically significant levels of stress and assess whether the effects hold up over a longer period of time. The daily diary analyses were also limited in that they examined concurrent relationships between behaviors and stressors within a given day rather than prospective relationships. This approach enabled a micro-level analysis of stress generation processes but it prevented the study from determining the direction of causality for the daily effects.

Despite evidence that stress generation occurs outside of depressive episodes (e.g., Daley et al., 1997; Hammen, 1991), a limited number of studies have examined factors other than depression that contribute to stress generation. As such, this study focused on aspects of interpersonal style that predict stress generation above and beyond the effects of depressive symptoms. However, future research should more fully examine the combined effects of interpersonal style and depressive symptoms in predicting stress generation. In addition, it should be noted the stress generation model (Hammen, 1991) was initially introduced as a model of depression vulnerability that represented an alternative to the diathesis-stress model of the disorder. However, more recently it has been posited that stress generation and diathesis-stress models of depression can be integrated (Hankin & Abramson, 2001). As such, future research should simultaneously test stress generation models, in which dependent stressors mediate the relationship between interpersonal style and depression, and diathesis-stress models, in which interpersonal style interacts with stressors in predicting depression. Studies should also test more comprehensive models encompassing both stress generation and diathesis-stress processes.

Nonetheless, this study's results have implications for the day-to-day lives of young women in romantic relationships. Over a given month, a woman with an attachment style that is characterized by fear of rejection and abandonment or a tendency to seek reassurance that she is cared for is more likely to contribute to the occurrence of conflict stressors within her romantic relationship. In addition to these effects over the course of a month, there are factors shaping women's experiences on a daily basis. Women who engage in maladaptive interpersonal behaviors in their romantic relationships on a given day experience elevated conflict with their partners that same day. These problematic behaviors encompass worries about abandonment, difficulty establishing closeness, overly dependent behaviors, submissive behaviors aimed at pleasing partners, and reassurance seeking behaviors.

Hammen's (1991) seminal research provided evidence for a process in which individuals actively contribute to the stressors they experience but few studies have actually examined the factors that contribute to stress generation. This study aimed to fill an important gap in the literature by examining aspects of interpersonal style and behaviors as predictors of generation of conflict stressors in romantic relationships. The study found that anxious attachment and reassurance seeking prospectively predicted conflict stress over a 4-week period, and a variety of specific interpersonal behaviors were associated with conflict stressors on a daily basis. In sum, this study represents an important step in understanding the factors that contribute to young women's experiences of stressors.

REFERENCES

Alden, L. E., & Bieling, P. J. (1996). Interpersonal convergence of personality constructs in dynamic and cognitive models of depression. *Journal of Research in Personality*, *30*, 60-75.

Beck, A. T., Epstein, N., Harrison, R. P., & Emery, G. (1983). *Development of the Sociotropy-Autonomy Scale: A measure of personality factors in psychopathology*. Unpublished manuscript, Center for Cognitive Therapy, University of Pennsylvania Medical School.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory* (2nd ed.). San Antonio, TX: Psychological Corporation.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, *4*, 561-571.

Bippus, A. M., & Rollin, E. (2003). Attachment style differences in relational maintenance and conflict behaviors: Friends' perceptions. *Communication Reports*, *16*, 113-123.

Blatt, S. J., Quinlan, D. M., & D'Afflitti, J. P. (1976). Experiences of depression in normal young adults. *Journal of Abnormal Psychology*, *85*, 383-389.

Bottonari, K. A., Roberts, J. E., Kelly, M. A. R., Kashdan, T. B., & Ciesla, J. A. (2007). A prospective investigation of the impact of attachment style on stress generation among clinically depressed individuals. *Behaviour Research and Therapy*, *45*, 179-188.

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation*. New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss, sadness and depression*. New York: Basic Books.

Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.

Brennan, K. A., & Carnelley, K. B. (1999). Using meaning to mend holes in the nomological net of excessive reassurance seeking and depression: Reaction to Joiner, Metalsky, Katz, & Beach, "Depression and excessive reassurance seeking." *Psychological Inquiry*, *10*, 282-285.

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationship* (pp. 46-76). New York: Guilford.

Brown, G. W., & Harris, T. (1978). *Social origins of depression*. London: Free Press.

Campbell, L., Simpson, J. A., Kashy, D. A., & Rholes, W. S. (2001). Attachment orientations, dependence, and behavior in a stressful situation: An application of the actor-partner interdependence model. *Journal of Social and Personal Relationships*, *18*, 821-843.

Chun, C., Cronkite, R. C., & Moos, R. H. (2004). Stress generation in depressed patients and community controls. *Journal of Social and Clinical Psychology*, *23*, 390-412.

Coyne, J. C. (1976). Toward an interactional description of depression. *Psychiatry*, *39*, 28-40.

Coyne, J. C. & Whiffen, V. E. (1995). Issues in personality as diathesis for depression: The case of sociotropy-dependency and autonomy-self-criticism. *Psychological Bulletin*, *118*, 358-378.

Creasey, G. (2002). Associations between working models of attachment and conflict management behavior in romantic couples. *Journal of Counseling Psychology*, *49*, 365-375.

Cui, X. J., & Vaillant, G. E. (1997). Does depression generate negative life events? *Journal of Nervous and Mental Disease*, *185*, 145-150.

Daley, S. E., Hammen, C., Burge, D., Davila, J., Paley, B., Lindberg, N., et al. (1997). Predictors of the generation of episodic stress: A longitudinal study of late adolescent women. *Journal of Abnormal Psychology*, *104*, 251-259.

Davila, J. (1999). Exploring alternative explanations for the association between depression and excessive reassurance-seeking. *Psychological Inquiry*, *10*, 285-287.

Davila, J., Bradbury, T. N., Cohan, C. L., & Tochluk, S. (1997). Marital functioning and depressive symptoms: Evidence for a stress generation model. *Journal of Personality and Social Psychology*, *73*, 849-861.

Davila, J., Hammen, C., Burge, D., Paley, B., & Daley, S. E. (1995). Poor interpersonal problem solving as a mechanism of stress generation in depression among adolescent women. *Journal of Abnormal Psychology*, *104*, 592-600.

Duggal, S., Malkoff-Schwartz, S., Birmaher, B., Anderson, B. P., Matty, M. K., Houck, P. R., et al. (2000). Assessment of life stress in adolescents: Self-report versus interview methods. *Journal of the American Academy of Child and Adolescent Psychiatry*, *39*, 445-452.

Erikson, E. (1950). *Childhood and society*. New York: W.W. Norton.

Feeney, J. A. (2004). *Adult attachment and relationship functioning under stressful conditions: Understanding partners' responses to conflict and challenge*. New York: Guilford.

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B.W. (1996). *Structured clinical interview for DSM-IV Axis I disorders, clinician version (SCID-1-CV)*. Washington, DC: American Psychiatric Press.

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*, 350-365.

Hammen, C. (1991). The generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology*, *100*, 555-561.

Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology*, *1*, 293-319.

Hammen, C., Adrian, C., Gordon, D., Burge, D., Jaenicke, C., & Hiroto, D. (1987). Children of depressed mothers: Maternal strain and symptom predictors of dysfunction. *Journal of Abnormal Psychology*, *96*, 190-198.

Hammen, C., & Brennan, P. A. (2001). Depressed adolescents of depressed and nondepressed mothers: Tests of an interpersonal impairment hypothesis. *Journal of Consulting and Clinical Psychology*, *69*, 284-294.

Hammen, C., & Brennan, P. A. (2002). Interpersonal dysfunction in depressed women: Impairments independent of depressive symptoms. *Journal of Affective Disorders*, *72*, 145-156.

Hammen, C., Marks, T., Mayol, A., & deMayo, R. (1985). Depressive self-schemas, life stress, and vulnerability to depression. *Journal of Abnormal Psychology*, *94*, 308-319.

Hankin, B. L., & Abramson, L. Y. (2001). Development of gender differences in depression: An elaborated cognitive vulnerability-transactional stress theory. *Psychological Bulletin*, *127*, 773-796.

Hankin, B. L., Kassel, J. D., & Abela, J. R. Z. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: Prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality and Social Psychology Bulletin*, *31*, 136-151.

Hankin, B. L., Mermelstein, R., & Roesch, L. (2007). Sex differences in adolescent depression: Stress exposure and reactivity models. *Child Development*, *78*, 279-295.

Harkness, K. L., & Luther, J. (2001). Clinical risk factors for the generation of life events in major depression. *Journal of Abnormal Psychology*, *110*, 564-572.

Harkness, K. L., Monroe, S. M., Simons, A. D., & Thase, M. E., (1999). The generation of life events in recurrent and non-recurrent depression. *Psychological Medicine*, *29*, 135-144.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511-524.

Hazan, C., & Shaver, P. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, *5*, 1-22.

Joiner, T. E. (1994). Contagious depression: Existence, specificity to depressed symptoms, and the role of reassurance seeking. *Journal of Personality and Social Psychology*, *67*, 287-296.

Joiner, T. E., Alfano, M. S., & Metalsky, G. I. (1992). When depression breeds contempt: Reassurance seeking, self-esteem, and rejection of depressed college students by their roommates. *Journal of Abnormal Psychology*, *101*, 165-173.

Joiner, T. E., Alfano, M. S., & Metalsky, G. I. (1993). Caught in the crossfire: Depression, self-consistency, self-enhancement, and the response of others. *Journal of Social and Clinical Psychology*, *12*, 113-134.

Joiner, T. E., & Metalsky, G. I. (1995). A prospective test of an integrative interpersonal theory of depression: A naturalistic study of college roommates. *Journal of Personality and Social Psychology*, *69*, 778-788.

Kessler, R. C., & Magee, W. J. (1993). Childhood adversities and adult depression: Basic patterns of association in a U.S. national survey. *Psychological Medicine*, *23*, 679-690.

Koopman, C., Gore-Felton, C., Marouf, F., Butler, L. D., Field, N., Gill, M., et al. (2000). Relationships of perceived stress to coping, attachment and social support among HIV-positive persons. *AIDS Care*, *12*, 663-672.

Lewinsohn, P. M., Joiner, T. E., Jr., & Rohde, P. (2001). Evaluation of cognitive diathesis-stress models in predicting major depressive disorder in adolescents. *Journal of Abnormal Psychology*, *110*, 203-215.

Mazure, C. M., & Maciejewski, P. K. (2003). The interplay of stress, gender and cognitive style in depressive onset. *Archives of Women's Mental Health*, *6*, 5-8.

McCarthy, C. J., Moller, N. P., & Fouladi, R. T. (2001). Continued attachment to parents: Its relationship to affect regulation and perceived stress among college students. *Measurement and Evaluation in Counseling and Development*, *33*, 198-213.

McCrae, R. R. (1990). Controlling neuroticism in the measurement of stress. *Stress Medicine*, *6*, 237-241.

McQuaid, J. R., Monroe, S. M., Roberts, J. E., Kupfer, D. J., & Frank, E. (2000). A comparison of two life stress assessment approaches: Prospective prediction of treatment outcome in recurrent depression. *Journal of Abnormal Psychology*, *109*, 787-791.

Mongrain, M., & Zuroff, D. C. (1994). Ambivalence over emotional expression and negative life events: Mediators of depressive symptoms in dependent and self-critical individuals. *Personality and Individual Differences*, *16*, 447-458.

Moore, K. A., & Burrows, G. D. (1996). *Stress and mental health*. Boca Raton, FL: CRC.

Nolen-Hoeksema, S. (2001). Gender differences in depression. *Current Directions in Psychological Science*, *10*, 173-176.

Paykel, E. S. (2003). Life events and affective disorders. *Acta Psychiatrica Scandinavica*, *108*, 61-66.

Pianta, R. C., & Egeland, B. (1994). Relation between depressive symptoms and stressful life events in a sample of disadvantaged mothers. *Journal of Consulting and Clinical Psychology*, *62*, 1229-1234.

Pincus, A. L., & Wilson, K. R. (2001). Interpersonal variability in dependent personality. *Journal of Personality*, *69*, 223-251.

Potthoff, J. G., Holahan, C. J., & Joiner, T. E. (1995). Reassurance seeking, stress generation, and depressive symptoms: An integrative model. *Journal of Personality and Social Psychology*, *68*, 664-670.

Priel, B., & Shahar, G. (2000). Dependency, self-criticism, social context and distress: Comparing moderating and mediating models. *Personality and Individual Differences*, *28*, 515-525.

Rabkin, J. G. (1993). *Stress and psychiatric disorders*. New York: Free Press.

Reis, H. T., & Gable, S. L. (2001). Event-sampling and other methods for studying everyday experience. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 190-222). Cambridge, UK: Cambridge University Press.

Robins, C. J. (1990). Congruence of personality and life events in depression. *Journal of Abnormal Psychology*, *99*, 393-397.

Rudolph, K. D. (2002). Gender differences in emotional responses to interpersonal stress during adolescence. *Journal of Adolescent Health*, *30*, 3-13.

Rosnow, R. L., & Rosenthal, R. (1996). Computing contrasts, effect sizes, and counternulls on other people's published data: General procedures for research consumers. *Psychological Methods*, *1*, 331-340.

Saxe, L. L., & Abramson, L. Y. (1987). *The Negative Life Events Questionnaire: Reliability and validity*. Unpublished manuscript.

Shahar, G., Henrich, C. C., Blatt, S. J., Ryan, R., & Little, T. D. (2003). Interpersonal relatedness, self-definition, and their motivational orientation during adolescence: A theoretical and empirical integration. *Developmental Psychology*, *39*, 470-483.

Shahar, G., Joiner, T. E. J., Zuroff, D. C., & Blatt, S. J. (2004). Personality, interpersonal behavior, and depression: Co-existence of stress-specific moderating and mediating effects. *Personality and Individual Differences*, *36*, 1583-1596.

Shahar, G., & Priel, B. (2003). Active vulnerability, adolescent distress, and the mediating/suppressing role of life events. *Personality and Individual Differences*, *35*, 199-218.

Shaver, P. R., & Hazan, C. (1987). Being lonely, falling in love: Perspectives from attachment theory. *Journal of Social Behavior and Personality*, *2*, 105-124.

Shaver, P. R., & Hazan, C. (1988). A biased overview of the study of love. *Journal of Social and Personal Relationships*, *5*, 473-501.

Shih, J. H. & Eberhart, N. K. (2008a). Sex differences in the effects of interpersonal behaviors on stress generation. Manuscript submitted for publication.

Shih, J. H. & Eberhart, N. K. (2008b). Understanding the impact of prior depression on stress generation: Examining the roles of current depressive symptoms and interpersonal behaviors. *British Journal of Psychology*, *99*, 413-426.

Shih, J. H., Eberhart, N. K., & Hammen, C. L. (2006). Differential exposure and reactivity to interpersonal stress predict sex differences in adolescent depression. *Journal of Clinical Child and Adolescent Psychology*, *35*, 103-115.

Sibley, C. G., & Liu, J. H. (2004). Short-term temporal stability and factor structure of the Revised Experiences in Close Relationships (ECR-R) measure of adult attachment. *Personality and Individual Differences*, *36*, 969-975.

Simons, A. D., Angell, K. L., Monroe, S. M., & Thase, M. E. (1993). Cognition and life stress in depression: Cognitive factors and the definition, rating, and generation of negative life events. *Journal of Abnormal Psychology*, *102*, 584-591.

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality and Social Psychology*, *71*, 899-914.

Wagner, C., Abela, J. R. Z., & Brozina, K. (2006). A comparison of stress measures in children and adolescents: A self-report checklist versus an objectively rated interview. *Journal of Psychopathology and Behavioral Assessment*, *28*, 251-261.

Zaretsky, A. E., Fava, M., Davidson, K. G., & Pava, J. A. (1997). Are dependency and self-criticism risk factors for major depressive disorder? *Canadian Journal of Psychiatry*, *42*, 291-297.

Received December 31, 2007
Revision accepted October 29, 2008