

PROTECTING US FROM OURSELVES: SOCIAL SUPPORT AS A BUFFER OF TRAIT AND STATE RUMINATION

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Relationships among rumination, social support, and negative affect were examined using a daily process methodology. Trait rumination predicted subsequent daily rumination about daily family stress. However, findings from multilevel modeling indicated that these effects were moderated by social support. Social support also attenuated the effect of state rumination on negative affect. When those higher in support ruminated, the effect on negative affect was buffered as compared to those lower in social support. Although our findings suggest that those high in trait rumination are more likely to respond to daily stressors with increases in daily rumination, we found that this effect too was attenuated among those with higher social support. Trait rumination was more strongly predictive of daily rumination among those who reported lower social support. Implications for models of rumination are discussed within a social contextual framework.

The perception that members of one's network are readily available to provide support has been linked to the relief of psychological

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distress, above and beyond the effects of support received (Wethington & Kessler, 1986). Social support may alter the strategies used to cope with stress, and the appraisal and emotional responses to stress (DeLongis & Holtzman, 2005; Thoits, 1995). The social support buffering hypothesis indicates that individuals especially vulnerable to the psychological consequences of stress may be those that most benefit from a supportive network (Cohen & Pressman, 2004). Such vulnerable peoples may include those undergoing difficult life stress, as well as those psychologically predisposed to respond to stress in ways that augment the experience of distress. Rumination, the tendency to perseverate on stressors, negative mood, and other self-related negative thoughts (Nolen-Hoeksema, 2004; Spasojevi , Alloy, Abramson, MacCoon, & Robinson, 2004; Trapnell & Campbell, 1999), is one such personality trait, consistently demonstrated to predispose individuals to distress and depression (Just & Alloy, 1997; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Robinson & Alloy, 2003). The purpose of the present study is to understand the buffering role of social support on rumination, through its attenuation of the rumination that occurs on a daily basis in response to stress and its attenuation of the emotional response to rumination.

UNDERSTANDING RUMINATION

Several experimental and prospective studies suggest that ruminating about depressive symptoms and life stressors moderates onset, duration, intensity, and number of dysphoric episodes and symptoms in nonclinical samples (Just & Alloy, 1997; Morrow & Nolen-Hoeksema, 1990; Spasojevi & Alloy, 2001), clinical samples (Matheson & Anisman, 2003), earthquake survivors (Nolen-Hoeksema & Morrow, 1991), and the bereaved (Bodnar & Kiecolt-Glaser, 1994; Nolen-Hoeksema & Davis, 1999; Nolen-Hoeksema, Parker, & Larson, 1994). Rumination has also been linked to other psychological problems, such as alcohol abuse and posttraumatic stress disorder (Nolen-Hoeksema & Harrell, 2002; Michael, Halligan, Clark, & Ehlers, 2007).

Extant research suggests a dispositional nature to rumination (Lyubomirsky & Nolen-Hoeksema, 1993). Levels of rumination have been found to remain relatively stable over periods of 30-days (Nolen-Hoeksema, Morrow, & Fredrickson, 1993), 5-months (Nolen-Hoeksema et al., 1994), and one-year (Just & Alloy, 1997; Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Yet, there is increasing evi-

dence that rumination does fluctuate in meaningful ways from day to day. These daily changes have been found to be associated with changes in negative affect that occur across days (Lavalley & Campbell, 1995; Wood, Saltzberg, Neale, Stone, & Rachmiel, 1990).

Recently, Moberly and Watkins (2008) sought to clarify the effects of rumination on same day affective states. Moberly and Watkins examined the roles of both trait and state rumination on the experience of negative daily events and their impact on negative affect (i.e., reactivity to negative events). They sampled university students eight random times throughout a day, measuring the occurrence of a recent negative event, ratings of negative affect, and rumination on each occasion. Moberly and Watkins demonstrated that trait rumination moderates the effects of negative events on negative affect, whereby negative affect is experienced to a greater extent after a negative event in those with a greater tendency to ruminate. Furthermore, state rumination (i.e., rumination measured at specific occasions) predicted subsequent negative affect independent of the effects of trait rumination.

THE ROLE OF SOCIAL SUPPORT IN RUMINATION

Although trait rumination is a risk factor for depression, Nolen-Hoeksema and Davis' (1999) research in bereaved parents indicates that social support can serve a protective function in the rumination-depression relationship. That is, under conditions of high social support, those bereaved parents high on trait measures of rumination reported less depression as compared to those with similarly high levels of rumination but low levels of emotional support. Those low in trait rumination had, on average, lower levels of depression, but also benefited from support, albeit to a lesser extent. The researchers argued that feeling socially connected and emotionally supported may have helped those high in trait rumination cope more actively and effectively. However, the issue of how social support might act to protect people from their own rumination remains an open one.

CURRENT STUDY

Here, we consider and test two potential pathways through which social support exerts its beneficial effects. First, social support may act to reduce the amount of rumination engaged in, in response to

negative events, by those with a greater tendency to ruminate. Research has demonstrated that individuals who feel supported apply more effective coping strategies in response to stressful events (DeLongis & Holtzman, 2005; Holtzman & DeLongis, 2007). Supportive others, perhaps via engaging their network members in more adaptive activities or by actively discouraging their attempts at rumination, may prevent or limit rumination in those who tend to engage in these cognitions. Another possibility is that social support works to reduce the effect of rumination on affect by changing the rumination process. Individuals with support may invest less into the consequences of the negative event. Thus, although the amount of rumination occurring on a day-to-day basis may not be decreased, the negative effects of the rumination on mood will be dissipated.

The aim of the current study was to investigate relations among social support, trait rumination, and state rumination in response to daily interpersonal stressors in couples living in stepfamilies. Due to the unique set of interpersonal stressors with which most stepfamilies must cope, this family form provides a rich context in which to examine interpersonal stress and coping. On average, those in stepfamilies face both higher levels and a greater variety of stress than do those in first marriage families (Bray & Berger, 1993; Hetherington, 1993). Indeed, the stress in stepfamilies with children has been reported to be consistently higher than that of first marriages, matching the level of first marriages only by the fourteenth year of marriage (Zeppa & Norem, 1993). For these reasons, stepfamilies provide a useful context for examination of interpersonal stress and coping processes. Within this challenging context, we focused on interpersonal stressors because these stressors have been found to account for a large proportion of the variance in daily affect (Almeida, 2005; Bolger, DeLongis, Kessler, & Schilling, 1989).

We obtained measures of trait rumination and social support, as well as daily assessments of negative affect and rumination. Based on prior evidence showing a direct relationship between rumination and negative affect (Moberly & Watkins, 2008; Wood et al., 1990), we expected significant and independent main effects for state rumination on fluctuations in negative affect from morning to evening within individuals, and trait rumination on mean negative affect between individuals. More specifically, it was expected that on days on which participants reported higher state rumination they would report greater increases in negative affect from morning to evening in comparison to days on which they reported lower state rumina-

tion. We also expected those higher in trait rumination to generally report higher daily negative affect. Further, we expected that a disposition to ruminate would moderate the relationship between daily levels of ruminating and negative affect, such that on days participants reported engaging in higher levels of rumination, those higher in the trait would report greater increases in evening negative affect as compared to those lower in the trait.

We also investigated the role of social support in both the relationships between daily rumination and negative affect and between the trait and the daily reporting of rumination. We expected that social support works via both of the pathways we have previously described. That is, although dispositional rumination generally has been found to be a good predictor of daily rumination, it was expected that social support would interact with trait rumination in predicting state rumination. Among those high in support, we expected the relationship between levels of state rumination and trait rumination to be attenuated. Second, social support was expected to mitigate the effects of ruminating on daily experiences of negative affect, such that those high in social support would be buffered from the potentially deleterious effects of state rumination on daily experiences of negative affect.

METHODS

PARTICIPANTS

Participants were recruited from the Lower Mainland of British Columbia via newspaper and radio advertisements, notices in school newsletters, posters on community bulletin boards, and solicitation at several local stepfamily groups. Participants were part of a larger prospective study on couples living in stepfamilies. Couples had spent an average of 4.6 years living together in the current union, with a range from less than a year to 12 years. For the current study, only those individuals who completed the first and second interviews, self-report measures, and structured daily diaries were included in the analyses ($N = 176$).

The mean age of the sample was 40 years, with a range from 20 to 59 years. The majority of participants were Canadian-born (72%), with the remainder largely from other English-speaking countries such as Great Britain and the United States. The mean level of education was 13 years, ranging from 5 to 17 years. Participants were

predominantly middle- to upper-middle class and the majority was employed (80%). Couples who completed the diary study were compared with those who did not complete the diary study on a variety of demographic and other variables, including education, income, years in the stepfamily, number of children from the current union, average age of children in the stepfamily, and relationship quality. The only significant difference between couples who completed diaries and those who did not was the average age of the children. In stepfamilies in which couples completed diary data, the children were older, on average, than in stepfamilies in which couples did not complete the diary study (M_s 12.02 and 9.79, respectively), $t(153) = 2.94, p < .01$.

PROCEDURES

Data for this study were drawn from a larger, longitudinal study on stepfamilies. The present study only includes procedures and measures from baseline interview, questionnaires, and daily reporting.

During the first phase of the study, in-depth telephone interviews were scheduled separately with each spouse. Each spouse was assigned to a different female interviewer and each interviewer was blind to any information received from the other spouse. Open-ended questions included in the initial interview were tape-recorded with permission from the participant to allow for verbatim transcription. The tapes also provided assurance that the interviewers were following standardized protocol. Following the first interview, participants were mailed a packet of self-report measures and a set of structured diaries to be completed twice per day over a period of one week. Participants returned the completed diaries at the end of the week. For the present study, data from both morning and evening entries were used. Participants were asked to complete the diary entries "around lunchtime or mid afternoon" and "just before going to sleep at night." Participants recorded the time of each entry of their diary. In cases where participants could not complete the diary at the time requested, they were asked to complete the diary segment as soon as possible afterwards, indicating the actual time at which the segment was completed. This was done so that back-filled diary entries could be identified and compared to nonbackfilled entries. Participants returned the diaries and self-report measures in stamped envelopes provided. In the instructions accompanying the

self-report measures and diaries, the importance of each spouse independently completing the packets was emphasized. Each spouse was further instructed to seal each diary entry after completion with adhesive tabs provided. These procedures were used to maximize independent completion and confidentiality.

INTERVIEW MEASURES

Demographics. Age, gender, and socio-economic status (SES) were assessed during the initial interview and used as control variables. SES was measured as total family income.

TAKE-HOME PACKET MEASURES

Trait Rumination (TR). The rumination scale of the Rumination-Reflection Questionnaire (RRQ; Trapnell & Campbell, 1999) was included in the take-home packet as a measure of participants' tendencies to attend to self-related negative content. Responses to each item are given on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). The rumination scale of the RRQ contains 12 items, and has demonstrated strong psychometric properties, including high internal consistency (Cronbach's $\alpha = .91$) and strong convergent validity with measures related to rumination (i.e., neuroticism and depression scales; Trapnell & Campbell, 1999). Example items include "often I am playing back over in my mind how I acted in a past situation," and "sometimes it is hard for me to shut out thoughts about myself." Cronbach's alpha in our study indicated high internal consistency ($\alpha = .93$). Higher scores on the rumination subscale reflect greater trait rumination.

Social Support. The Provisions of Social Relations Scale (PSR; Turner, Frankel, & Levin, 1983) was included in the take-home packet to be completed individually by the participants. The PSR scale is a 15 item questionnaire developed to assess five components of social support (attachment, social integration, reassurance of worth, reliable alliance, and guidance) from both family and friends. The scale has shown strong psychometric properties, indicating good internal consistency and convergent validity with other measures of support, in both community and clinical samples (Turner et al., 1983; Turner, Sorenson, & Turner, 2000). Items are scored on a 5 point Likert scale (1 = very much like me to 5 = not at all like me) and

appropriate items are reverse coded such that higher scores represent greater perceived support. Example items include "no matter what happens, I know that my family will always be there should I need them," and "my friends would take the time to talk over my problems, should I ever want to." In our sample, Cronbach's alpha demonstrated that the PSR had good internal consistency ($\alpha = .75$).

DAILY RECORD MEASURES

The following measures were completed for 7 consecutive days.

Negative Affect. Negative affect (NA) was measured twice daily, once midday and once in the evening. NA was assessed with a short form of the negative affect subscale of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). At midday, respondents were instructed to "circle the number that best describes how much you experienced the following emotions so far today" (Morning Negative Affect, referred to as AM NA). At bedtime, they were instructed to "circle the number that best describes how much you experienced the following emotions since your last diary entry" (Evening Negative Affect, referred to as PM NA). Negative affect included 5 items from the PANAS (i.e., feeling guilty, nervous, upset, irritable, and afraid) and an additional item representing sadness derived from the Affects Balance Scale (Derogatis, 1975). A 3-point Likert scale was used ranging from 1 (not at all) to 3 (a lot). Cronbach's alpha for the short form of the scale showed adequate internal consistency ($\alpha = .73$). The mean autocorrelations for negative affect was .37 for AM NA and .34 for PM NA for a one day lag.

State Rumination (SR). State rumination was recorded once a day in the evening before going to sleep. Participants were asked to describe "the most bothersome event or problem you had with someone in your family today. It might have been something as minor as your child's distress over something that happened at school or it might have been a major argument or disagreement." Participants responded to three items on a scale ranging from 1 (not at all) to 5 (a lot): "Did you find it hard to stop thinking about the problem afterward?" "When thinking about the problem afterward, did your thoughts tend to dwell on negative aspects of it, or how badly you felt about it?" and "Did thinking about the problem tend to make the problem seem worse or make you feel worse about it?" Similar questions were used

TABLE 1. Means, Standard Deviations and Intercorrelations (Pearson's *r*)

	Mean	SD	1	2	3	4	5
1. State rumination	1.94	0.66	(.89)				
2. Morning negative affect	1.29	0.24	.36***	(.78)			
3. Evening negative mood	1.90	0.26	.40***	.81***	(.75)		
4. Trait rumination	2.96	0.74	.45***	.30***	.28***	(.93)	
5. Social support	4.05	0.62	-.17*	-.10	-.07	-.31***	(.75)

Notes. Reliability coefficients (Cronbach's α) are shown in parentheses. Females in our study were scored 1, and males were scored -1. * $p < .05$; ** $p < .01$; *** $p < .001$.

by Trapnell and Campbell (1999) and Wood et al. (1990). Cronbach's alpha for the three-item scale indicated high internal consistency ($\alpha = .90$). Due to concerns about item overlap between the third item, "Did thinking about the problem make you feel worse about it?" and negative affect, this item was dropped from further analyses. This is consistent with concerns in the literature related to item overlap between rumination scales and depressive symptomatology (Conway, Csank, Holm, & Blake, 2000; Cox, Enns, & Taylor, 2001; Segerstrom, Tsao, Alden, & Craske, 2000). Cronbach's alpha for the two item scale indicated high internal consistency ($\alpha = .89$). The mean autocorrelation for SR was .32 for a one day lag, $p \leq .001$.

RESULTS

UNIVARIATE AND BIVARIATE ANALYSES

First, the means and standard deviations were calculated for both the time variant and time invariant (Level one and Level two, respectively) study variables. Level 1 variables were aggregated for each participant over all time points. Table 1 reports the means and standard deviations for all study variables included in the present investigation. Table 1 also presents Pearson product moment correlations between aggregated Level 1 and Level 2 study variables.

MULTILEVEL MODELING

We used multi-level modeling (Raudenbush & Bryk, 2002), which allowed for the simultaneous examination of both between-person

differences in trait rumination and within-person differences in daily rumination and negative affect. Using a time-intensive design can minimize recall error and allow a close examination of the temporal patterning of changes in rumination and affect (Tennen, Afleck, Coyne, Larsen, & DeLongis, 2006).

Prior to examining the relationships between daily experiences of affect and rumination and initial trait rumination and support, we sought to examine whether our daily outcomes (state rumination, and evening negative affect) were related to day of participation in the study in two ways: (a) whether linear or quadratic systematic changes occurred in our outcomes over the course of the seven days of participation, and (b) whether any particular days were significantly related to days closer to them in time, as compared to days further away in time. In order to evaluate systematic changes in our outcomes (i.e., autocorrelations), we first estimated a linear model of time and then a linear (Day) and quadratic (Day²) model for participants across the seven days. Day and Day² were not significantly related to our outcomes, and thus, no systematic changes occurred in our outcomes over the course of the study.

Next, we conducted a series of analyses predicting our outcomes from dummy coded day of study (i.e., 7 days of the study dummy coded into 7 new variables). We predicted our outcomes from a series of models: day 2 through day 7 to evaluate whether day 1 was significantly related to days closer in time as opposed to further in time; we repeated this method for the other days. There were no significant relationships between any of the days of the week with any of the other days for evening negative affect. As a result, we did not model previous day levels of our outcomes in subsequent analyses.

Participants completed 90.5% and 89.4% of morning and evening reports, with a majority (89.2%) of participants completing at least 5 or more days. We were also interested in examining whether high trait ruminators were more likely to backfill (i.e., complete a diary entry at a different time than they were supposed to), to fail to complete the 7 days of daily diary questionnaires, or to complete the questionnaires at either earlier or later times during the day as compared to low ruminators. First, we performed a logistic hierarchical linear model, wherein 1 was completed according to protocol, and 0 did not complete according to protocol, due to either backfilling or not completing the seven days. We also analyzed, using HLM3, whether higher trait ruminators were more likely to complete the

questionnaires at either earlier or later times of the day, compared to lower trait ruminators. For both sets of analyses, we found no evidence to suggest that high ruminators either backfilled more often, completed fewer or more days of the study, or filled the diaries out earlier or later than lower trait ruminators.

WHAT ARE THE RELATIONSHIPS BETWEEN TRAIT RUMINATION, SOCIAL SUPPORT, STATE RUMINATION, AND DAILY FLUCTUATIONS OF NEGATIVE AFFECT?

HLM was used to examine relationships between negative affect, TR, social support, and SR. Our Level 1 variables were centered in HLM around the group means, and our Level 2 variables (with the exception of gender) were centered around the grand means in HLM. We tested a 3-Level model: within-person variation was modeled at Level 1, between-person variation was modeled at Level 2, and Level 3 accounted for the nesting of each individual within couple. A 3-Level model was used (Atkins, 2005), as opposed to a two-level within couple analysis (Laurenceau & Bolger, 2005). A 3-Level model can be used when the question of interest is not about couples per se, but about the individuals within a couple (Atkins, 2005). Thus, our models permitted the examination of between and within person sources of variation simultaneously, while controlling for dependence that might occur due to couples.

Separate regression slopes and intercepts were estimated for each person in the Level 1 specification of within-person variation. In the Level 2 specification of between-person variation, the Level 1 regression parameters are used to estimate average parameter estimates across all participants. The amount of variation around this average was also estimated at the Level 2 specification. Variables that could potentially have varying values within a person were added at Level 1 (e.g., negative affect, SR), and variables that had a common value within person were added at Level 2 (e.g., TR and social support).

Prior to specifying models testing our hypotheses, demographic variables (gender, age, years of education, and family income) were modeled individually onto both the intercepts of evening negative affect and SR. Only gender was found to be significantly related to evening negative affect and SR, consistent with the literature suggesting that women tend to ruminate more (Nolen-Hoeksema,

1987, 1991). We dropped the nonsignificant demographic predictors and retained only gender in subsequent analyses examining evening negative affect and SR (Kreft & DeLeeuw, 1998; Raudenbush & Bryk, 2002; Snijders & Bosker, 1999).

Are TR and SR Independently Associated with Fluctuations in Negative Affect? Do TR and SR Interact to Predict Negative Affect? Initially, we specified a preliminary model predicting evening negative affect that included morning negative affect and gender. Morning negative affect was added to the model to help allow examination of shifts in mood across the day, as well as to control for autocorrelation. We used the preliminary model here to exemplify the nature and meaning of the multilevel model. The model for each participant can be expressed as:

$$\begin{aligned} \text{Level 1: } Y_{ijk}(\text{PM NA}) &= \pi_{0jk} + \pi_1(\text{AM NA}_{ijk}) + e_{ijk} \\ \text{Level 2: } \pi_{0jk} &= \beta_{00} + \beta_{01}(\text{Gender}) + r_{0jk} \\ \pi_1 &= \beta_{10} \\ \text{Level 3: } \beta_{00} &= \gamma_{000} + u_{00k} \\ \beta_{01} &= \gamma_{010} \\ \beta_{10} &= \gamma_{100} \end{aligned}$$

At Level 1, the outcome Y_{ij} (PM NA; evening negative affect) is the amount of evening negative affect on day i for person j in couple k . It is a function of the person's own average across all days (π_{0j}), and the slope that represents the association between that person's morning and evening negative affect (π_{1j}). AM NA $_{ijk}$ (morning negative affect) is the amount of morning negative affect on day i for person j in couple k and e_{ijk} is within-person error. At Level 2, intercept (π_{0jk}) for any person j in couple k is a function of the mean PM NA across persons (intercept β_{00}), gender and its respective regression coefficient (β_{01}) and between-person error (r_{ijk}). At Level 3, given that persons were nested within couples, we modeled random variability in mean PM NA across persons that is carried by both members of the couple ($\beta_{00} = \gamma_{000} + u_{00k}$). AM NA and gender were significantly associated with PM NA, $\beta = .18$, $t(517) = 2.19$, $p < .05$ and $\beta = .06$, $t(129) = 3.42$, $p < .001$, respectively.

Next, we included TR in Level 2 of the model. TR was significantly associated with evening negative affect, $\beta = .11$, $t(128) = 4.85$, $p < .001$. Both morning negative affect and gender remained significantly associated with evening negative affect. Following, SR was included in the model. At the within-person level, state rumination was significantly associated with PM NA, $\beta = .14$, $t(515) = 6.78$, $p < .001$.

TABLE 2. Multilevel Model: Relations of Study Variables to Evening Negative Affect

Effect	Evening Negative Affect (model 1)		Evening Negative Affect (model 2)	
	β	SE	β	SE
Morning negative affect	0.09	0.08	0.10	0.08
State rumination	0.13***	0.02	0.13***	0.12
Gender	0.04	0.02	0.06***	0.02
Trait rumination	0.11***	0.02	—	—
Trait rumination x State rumination	0.05*	0.03	—	—
Social support	—	—	-0.05	0.04
State rumination x Social support	—	—	-0.06*	0.03

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; † $p < .10$.

Morning negative affect was not significantly associated with evening negative affect after controlling for the other variables in the model. Finally, we examined the interaction of TR with SR in predicting evening negative affect. The interaction between TR and SR was significant, $\beta = .05$, $t(514) = 2.00$, $p < .05$. Table 2, model 1 presents the final model for evening negative affect, including the TR-SR interaction. In order to better determine the nature of the interaction effect, we computed evening negative affect at values one standard deviation above and below the mean of TR. Simple slope regression analyses revealed that SR is significantly related to evening negative affect at both one standard deviation above and below the mean, ($\beta = 0.15$, $t = 8.76$, $p < .0001$, and $\beta = 0.12$, $t = 4.62$, $p < .001$, respectively), though the significant interaction effect reveals SR to be more strongly associated with evening negative affect in higher TR individuals than in those with lower TR.

DOES SOCIAL SUPPORT AND SR INTERACT TO PREDICT FLUCTUATIONS IN NEGATIVE AFFECT?

We structured our analyses for social support similarly to the analyses for TR and SR as predictors of evening negative affect. Again, morning negative affect was added to the model. We developed a model that included morning negative effect, and SR at Level 1, and social support and gender at Level 2. Both state rumination and gender were significantly associated with evening negative affect, $\beta = .14$, $t(515) = 6.78$, $p < .001$, and $\beta = .06$, $t(128) = 3.56$, $p < .001$. Next,

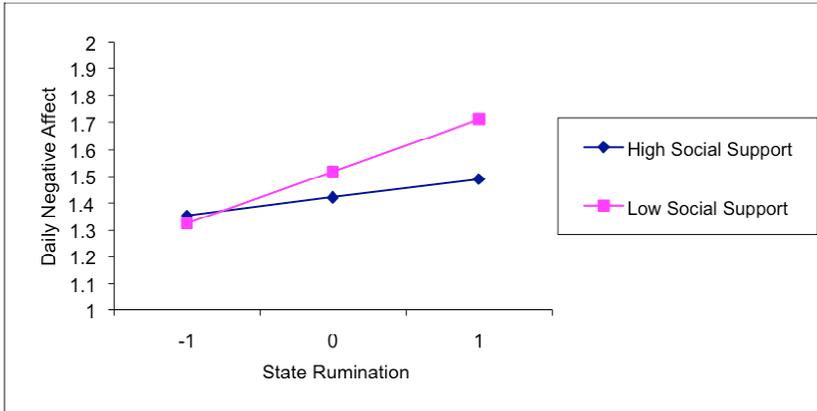


FIGURE 1. Evening negative affect as a function of social support and state rumination.

we examined the interaction of social support and SR in predicting evening negative affect. The interaction, $\beta = -.06$, $t(514) = -1.95$, $p < .05$ and the main effects of SR and gender were significant (see Table 2, model 2 for final results). To better understand the nature of the interaction effect, we computed evening negative affect at values one standard deviation above and below the mean of social support. Simple slope regression analyses revealed that at both one standard deviation above and below the mean of social support, SR is significantly related to evening negative affect ($\beta = 0.09$, $t = 3.62$, $p < .001$, and $\beta = 0.17$, $t = 9.60$, $p < .001$, respectively). Figure 1 illustrates the relationship of social support and SR with evening negative affect, controlling for morning negative affect and gender. As can be seen, for participants who reported lower social support, increases in daily rumination were associated with greater increases in negative affect, compared to those higher in social support.

DOES SOCIAL SUPPORT MODERATE THE EFFECTS OF TR ON SR?

First, we specified a model predicting SR that included evening negative affect and gender. Evening negative affect was included in the model because negative affect and rumination have been found to covary in previous studies (Lavalley & Campbell, 1995; Wood et al., 1990) and in this study. Gender and evening negative affect were significantly associated with SR, $\beta = .11$, $t(132) = 2.14$, $p < .05$,

TABLE 3. Multilevel Model: Relations of Gender, Morning Negative Affect, Trait Rumination, and Social Support to State Rumination

Effect	State Rumination	
	β	SE
Negative affect	1.06***	0.13
Previous day rumination	—	—
Gender	0.04	0.05
Trait rumination	0.27***	0.06
Social support	-0.03	0.05
Trait rumination x social support	-0.13**	0.04

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

and $\beta = 1.06$, $t(544) = 7.96$, $p < .001$, indicating that women report higher levels of SR. Next, TR, social support and their interaction were added to the model (see Table 3). The interaction between social support and TR was significantly associated with SR, $\beta = -.13$, $t(129) = -3.01$, $p < .01$.

Again, we computed SR at values one standard deviation above and below the mean of social support, in order to clarify the direction of the interaction effect (see Figure 2). Simple slope regression analyses revealed that at both one standard deviation above and below the mean, TR is significantly related to SR ($\beta = 0.29$, $t = 3.179$, $p < .01$, and $\beta = 0.55$, $t = 8.385$, $p < .001$, respectively). As can be seen in Figure 2, those lower in social support had stronger positive relationships between TR and SR, as compared to those higher in social support.¹

DISCUSSION

The present study primarily sought to examine perceived support as a buffer of the deleterious effects of trait and state rumination on the stress process and on negative affect fluctuations. Our findings suggest that perceived social support serves to protect those with a

1. In addition to testing the moderation effects separately we tested the entire model within a multilevel moderated mediation model (Bauer, Preacher, & Gil, 2006). Our complete model did not reach significance, possibly a result of the number of Level 1 observations which limits the variance components required to test the multilevel moderated mediation model (Bauer et al., 2006). Furthermore, and consistent with Moberly and Watkins (2008), it seems trait and state rumination are independent significant predictors of daily negative affect.

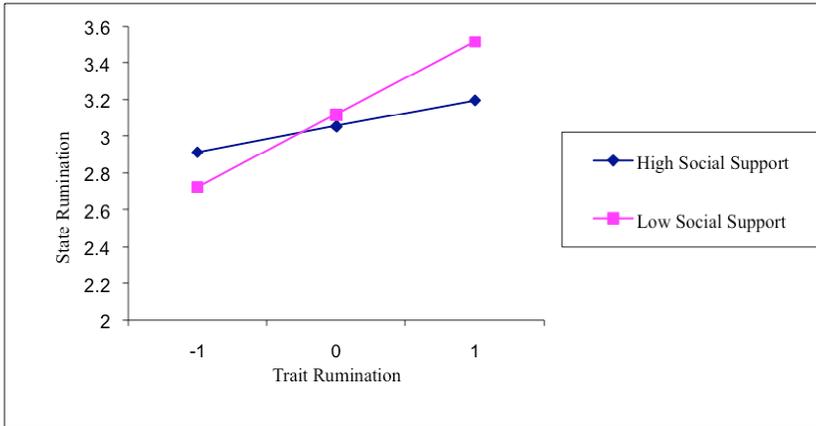


FIGURE 2. State rumination as a function of social support and trait rumination.

higher tendency to ruminate from doing so on a daily basis. Further, we found that when individuals did ruminate, the effect on negative affect was buffered.

TRAIT RUMINATION, STATE RUMINATION, AND NEGATIVE AFFECT

Our findings lend support to the proposition that there are individual differences in the tendency to enter a cycle of rumination, and that these individual differences have important implications for the tendency to experience prolonged and intense distress (Moberly & Watkins, 2008; Wood et al., 1990). First, our findings suggest that trait measures of rumination are indeed predictive of ruminating in response to daily stressors. In turn, our findings indicate that these increases in daily rumination are associated with significant increases in negative affect within days. More importantly, we found that there was a significant interaction between trait and state rumination. On days when individuals engaged in daily rumination, those scoring higher on measures of trait rumination appeared to be more likely to experience poorer mood when compared to those lower in trait rumination. State rumination was related to negative affect in general but had a significantly stronger association among those higher in trait rumination.

Experimental evidence suggests possible explanations for differences between those high and low in dispositional rumination in terms of their experiences of negative affect. Trait rumination has been associated with a general propensity to focus on the causes and meaning of intrusive thoughts (Nolen-Hoeksema & Morrow, 1991; Watkins, 2004). Additionally, those higher in trait rumination find more reasons for being in a negative mood, as compared to those lower in the disposition (Watkins & Mason, 2002). Taken together, it seems that when engaging in rumination, higher trait ruminators, as compared to lower trait ruminators, may be more efficacious in calling up negative food for thought, and, without the inclination to shut the cycle off, get further caught up in their negative mood as compared to those lower in trait rumination.

SOCIAL SUPPORT AND RUMINATION

Support is well documented as a stress buffer (Cohen & Pressman, 2004; Cohen & Wills, 1985; House, Umberson, & Landis, 1988), yet the pathways through which support results in better outcomes are not entirely clear. These findings suggest that one pathway through which social support has its beneficial effects is via rumination. In our study, higher trait rumination was associated with lower levels of social support. Yet, those higher in trait rumination who did feel supported were less likely to ruminate on a daily basis. Further, our findings suggest that when those higher in social support did ruminate, the effect on negative affect was attenuated.

Being able to talk about one's feelings and thoughts with others may help to prevent rumination from occurring, or alternatively, to help get closure once rumination has begun. Without someone to talk to about one's thoughts and feelings, there may be more of a tendency to engage in "wheel-spinning" without moving forward in processing stressful events. These protective effects of social support appear to be all the more important among those who have a tendency to persevere and to remain in a rumination-negative mood cycle (Nolen-Hoeksema & Davis, 1999; Rimé, 1995).

Individuals with a greater tendency to ruminate have been found to have weaker networks, lower problem-solving ability, and more interpersonal strain (Lyubomirsky & Nolen-Hoeksema, 1995; Spasojevic et al., 2004). For example, findings from experimental research suggest that ruminating is linked to increases in angry mood and

angry behavior, such as displaced aggression towards others (Bushman, Bonacci, Pederson, Vasquez, & Miller, 2005; Rusting & Nolen-Hoeksema, 1998). We speculate that social support serves to buffer the effect of rumination on such negative mood states and behaviors because support serves two purposes. First, a perception of support may arise in the context of received support. Support received from one's network potentially alters the coping strategies used by those high in trait rumination. High trait ruminators may be encouraged to problem solve, in place of, or in addition to, the typical perseveration. Consistent with this, in a sample of rheumatoid arthritis patients and their spouses, we found that social support was associated with more adaptive pain coping efforts (Holtzman, Newth, & DeLongis, 2004). Second, support may directly improve mood by distracting an individual from negative mood states. Our study's findings suggest that even when engaging in a maladaptive response to stress, such as rumination, those who perceive support do not experience the same levels of negative affect as do those who do not perceive support. One possibility is that those who feel supported have a stronger sense of self-worth (Wethington & Kessler, 1986), and as such, may be less emotionally invested in the stressor, regardless of the amount of cognitive processing in which they engage.

LIMITATIONS AND FUTURE DIRECTIONS

The current study investigated rumination in response to interpersonal stress within couples living in stepfamilies. The stress in stepfamilies is most often related to family processes and conflict (Preece & DeLongis, 2005), providing a useful context for the examination of daily interpersonal stress. Married individuals experience greater support than nonmarried individuals (Ross, 1995), and being married confers psychological and physical advantage compared to being single or divorced (House et al., 1988; Seeman, Kaplan, Knudsen, Cohen, & Guralnik, 1987). Thus our findings may be limited to situations in which couples are coping with interpersonal stress, and certainly need to be replicated outside of a stepfamily context. As important as this context may be, support processes may play out differently in these families (Preece & DeLongis, 2005).

In addition, our measure of support was a global one; we were not able to examine support from partners, family members and friends separately. Future studies will need to examine whether

there are differences by source of support. Additionally, future research should examine the extent to which the buffering potential of support on rumination is due to perceived or received support, or both. Bolger, Zuckerman, and Kessler (2000) demonstrated that spousal reports of support provided but not perceived by one's partner (invisible support) has a greater effect on alleviating stress compared to when partners perceive that they are supported.

Although our findings are consistent with Nolen-Hoeksema's (2004) model in which perseverating on stressful content deepens negative mood, the opposite also seems likely: negative mood may lead to heightened rumination. Further, increased negative affect may bias individuals to report more rumination than actually experienced. Evidence suggests that negative mood can induce an evaluative process such as rumination (Carver, 1996; Carver & Scheier, 1990; Martin, Shrira, & Startup, 2004). At the state level, Moberly and Watkin (2008) demonstrated that negative affect also influences subsequent rumination. Similarly, in our study, morning negative affect was related to evening rumination, thus supporting the idea that a negative affective state can predict increased rumination later in the day.

Additionally, the current study examined the relationship between two daily variables, namely rumination and negative affect. Two important factors associated with daily distress that were not examined in the present study are stress exposure and stress reactivity. Bolger and Zuckerman (1995) demonstrated that highly neurotic individuals tend to have more occurrences of stress and more reactivity to stress resulting in increased experiences of daily distress levels. Neuroticism has previously been associated with rumination (Nolan, Roberts, & Gotlib, 1998; Trapnell & Campbell, 1999) and therefore, it is possible that rumination is associated with both stress reactivity and stress exposure, not explored to date. Stress reactivity and exposure may predict both daily negative affect and rumination independently and explain the observed relationship between negative affect and rumination. This suggests that a fruitful direction of future research lies in examining the relationships among stress reactivity, stress exposure, daily rumination, and daily negative affect.

Future research should examine the extent to which partners co-ruminate in response to stress. Evidence from young women indicates that teenagers that co-ruminate on a stressor experience greater negative affect, both in the laboratory and in naturalistic settings

(Calmes & Roberts, 2008; Rose, 2002), and greater cortisol responses (Byrd-Craven, Geary, Rose, & Ponzi, 2008). As such, future work should investigate the impact of partners' rumination on one another in response to shared stressors.

Finally, we used paper and pencil diaries in the present study. One concern that has been raised with the use of paper diaries is backfilling; that is whether participants' reporting of daily events occurred at the times specified by the researchers as opposed to some later time. Unlike studies that have reported high rates of backfilling (Stone, Shiffman, Schwartz, Broderick, & Hufford, 2003), we asked participants to indicate the actual time at which they completed a diary segment, regardless of the period of time on which they were reporting. Thus, even if a participant forgot to complete a diary entry on time, he or she was asked to complete it when possible, indicating both the time period on which s/he was reporting, as well as the actual time of completion. These instructions are likely reasons for the low rates of backfilling in the present study. Furthermore, Tennen and colleagues (2006) outlined situations in which paper diaries are not vulnerable to backfilling, such as when same day relationships are informative, as in the present study. Finally, a series of studies by Green, Rafaeli, Bolger, Shrout, and Reis (2006) suggest that data collected via paper diaries are equivalent in terms of means, variances, and patterns of associations to data collected via electronic diaries.

CONCLUSION

Our study reveals that perceived network support buffers the relationship between ruminating in response to self-related content and negative affect and dampens the tendency to ruminate. Although we speculate on the mechanisms by which social support may do so, future research might examine these mechanisms. Others have reported that social support is associated with less threatening appraisals (Cohen & Pressman, 2004; Thoits, 1986) and more adaptive coping efforts (DeLongis & Holtzman, 2005; Valentiner, Holahan, & Moos, 1994). Future research can help delineate the processes by which support buffers the extent to which high trait ruminators ruminate to daily stress, and why daily rumination does not affect mood states severely when an individual perceives a supportive network.

REFERENCES

- Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via diary methods. *Current Directions in Psychological Science, 14*, 64-68.
- Atkins, D. (2005). Using multilevel models to analyze couple and family treatment data: Basic and advanced issues. *Journal of Family Psychology, 19*, 98-110.
- Bauer, D. J., Preacher, K. J., & Gil, K. M. (2006). Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: New procedures and recommendations. *Psychological Methods, 11*, 142-163.
- Bodnar, J. C., & Kiecolt-Glaser, J. K. (1994). Caregiver depression after bereavement: Chronic stress isn't over when it's over. *Psychology and Aging, 9*, 372-380.
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology, 57*, 808-818.
- Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology, 69*, 890-902.
- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). Invisible support and adjustment to stress. *Journal of Personality and Social Psychology, 79*, 953-961.
- Bray, J. H., & Berger, S. H. (1993). Developmental issues in stepfamilies research project: Family relationships and parent-child interactions. *Journal of Family Psychology, 7*, 76-90.
- Bushman, B. J., Bonacci, A. M., Pederson, W. C., Vasquez, E. A., & Miller, N. (2005). Chewing on it can chew you up: Effects of rumination on triggered displaced aggression. *Journal of Personality and Social Psychology, 88*, 969-983.
- Byrd-Craven, J., Geary, D., Rose, A., & Ponzi, D. (2008). Co-ruminating increases stress hormone levels in women. *Hormones and Behavior, 53*, 489-492.
- Calmes, C. A., & Roberts, J. E. (2008). Rumination in interpersonal relationships: Does corumination explain gender differences in emotional distress and relationship satisfaction among college students? *Cognitive Therapy and Research, 32*, 577-590.
- Carver, C. S. (1996). Goal engagement and the human experience. In R. S. Wyer, Jr. (Ed.), *Advances in social cognition* (pp. 49-61). Hillsdale, NJ: Erlbaum.
- Carver, C. S., & Scheier, M. E. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*, 19-35.
- Cohen, S., & Pressman, S. (2004). The stress-buffering hypothesis. In N. Anderson (Ed.), *Encyclopedia of health and behavior* (pp. 780-182). Thousand Oaks, CA: Sage Publications.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.
- Conway, M., Csank, P. A. R., Holm, S. L., & Blake, C. K. (2000). On assessing individual differences in rumination on sadness. *Journal of Personality Assessment, 75*, 404-425.
- Cox, B. J., Enns, M. W., & Taylor, S. (2001). The effect of rumination as a mediator of elevated anxiety sensitivity in major depression. *Cognitive Therapy and Research, 25*, 525-534.
- DeLongis, A., & Holtzman, S. (2005). Coping in context: The role of stress, social support, and personality in coping. *Journal of Personality, 73*, 1633-1656.
- Derogatis, L. R. (1975). *Affects balance scale*. Baltimore, MD: Clinical Psychometrics Research Unit.

- Green, A. S., Rafaeli, E., Bolger, N., Shrout, P. E., & Reis, H. T. (2006). Paper or plastic? Data equivalence in paper and electronic diaries. *Psychological Methods, 11*, 87-105.
- Hetherington, E. M. (1993). An overview of the Virginia longitudinal study of divorce and remarriage with a focus on the early adolescent. *Journal of Family Psychology, 7*, 39-56.
- Holtzman, S., & DeLongis, A. (2007). One day at a time: The impact of daily satisfaction with spouse responses on pain, negative affect and catastrophizing among individuals with rheumatoid arthritis. *Pain, 131*, 202-213.
- Holtzman, S., Newth, S., & DeLongis, A. (2004). The role of social support in coping with daily pain among patients with Rheumatoid Arthritis. *Journal of Health Psychology, 9*, 749-767.
- House, J. S., Umberson, D., & Landis, K. R. (1988). Structures and processes of social support. *Annual Review of Sociology, 14*, 293-318.
- Just, N., & Alloy, L. B. (1997). The response styles theory of depression: Tests and an extension of the theory. *Journal of Abnormal Psychology, 106*, 221-229.
- Kreft, I., & De Leeuw, J. (1998). *Introducing multilevel modeling*. New York: Russell Sage.
- Laurenceau, J.-P., & Bolger, N. (2005). Using diary methods to study marital and family processes. *Journal of Family Psychology, 19*, 86-97.
- Lavallee, J., & Campbell, J. (1995). Impact of personal goals on self-regulation processes elicited by daily negative events. *Journal of Personality and Social Psychology, 69*, 341-352.
- Lyubomirsky, S., & Nolen-Hoeksema, S. (1993). Self-perpetuating properties of dysphoric rumination. *Journal of Personality and Social Psychology, 65*, 339-349.
- Lyubomirsky, S., & Nolen-Hoeksema, S. (1995). Effects of self-focused rumination on negative thinking and interpersonal problem solving. *Journal of Personality and Social Psychology, 69*, 176-190.
- Martin, L. L., Shrira, I., & Startup, H. M. (2004). Rumination, depression, and meta-cognition, The S-REF model. In C. Papageorgiou & A. Wells (Eds.), *Depressive rumination: Nature, theory, and treatment* (pp. 153-175). London: John Wiley & Sons.
- Matheson, K., & Anisman, H. (2003). Systems of coping associated with dysphoria, anxiety, and depressive illness: A multivariate profile perspective. *Stress, 6*, 223-234.
- Michael, T., Halligan, S. L., Clark, D. M. & Ehlers, A. (2007). Rumination in posttraumatic stress Disorder. *Depression and Anxiety, 24*, 307-317.
- Moberly, N. J., & Watkins, E. R. (2008). Ruminative self-focus and negative affect: An experience sampling study. *Journal of Abnormal Psychology, 117*, 314-323.
- Morrow, J., & Nolen-Hoeksema, S. (1990). Effects of responses to depression on the remediation of depressive affect. *Journal of Personality and Social Psychology, 58*, 519-527.
- Nolan, S. A., Roberts, J. E., & Gotlib, I. H. (1998). Neuroticism and ruminative response style as predictors of change in depressive symptomatology. *Cognitive Therapy and Research, 22*, 445-455.
- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin, 101*, 259-282.
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*, 569-582.

- Nolen-Hoeksema, S. (2004). The response styles theory. In C. Papageorgiou & A. Wells (Eds.), *Depressive rumination: Nature, theory, and treatment* (pp. 107-123). London: John Wiley & Sons.
- Nolen-Hoeksema, S., & Davis, C. G. (1999). "Thanks for sharing that": Ruminators and their social support networks. *Journal of Personality and Social Psychology*, 77, 801-814.
- Nolen-Hoeksema, S., & Harrell, Z. A. (2002). Rumination, depression, and alcohol use: Tests of gender differences. *Journal of Cognitive Psychotherapy*, 16, 391-404.
- Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and post-traumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. *Journal of Personality and Social Psychology*, 61, 115-121.
- Nolen-Hoeksema, S., Morrow, J., & Fredrickson, B. L. (1993). Response styles and the duration of episodes of depressed mood. *Journal of Abnormal Psychology*, 102, 20-28.
- Nolen-Hoeksema, S., Parker, L. E., & Larson, J. (1994). Ruminative coping with depressed mood following loss. *Journal of Personality and Social Psychology*, 67, 92-104.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, 3, 400-424.
- Preece, M., & DeLongis, A. (2005). Stress, coping, and social support processes in stepfamilies. In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping*. Washington, DC: American Psychological Association.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Newbury Park, CA: Sage.
- Rimé, B. (1995). Mental rumination, social sharing, and the recover of emotional exposure. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 271-292). Washington, DC: American Psychological Association.
- Robinson, M. S., & Alloy, L. B. (2003). Negative cognitive styles and stress-reactive rumination interact to predict depression: A prospective study. *Cognitive Therapy and Research*, 27, 275-292.
- Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development*, 73, 1830-1843.
- Ross, C. E. (1995). Reconceptualizing marital status as a continuum of social attachment. *Journal of Marriage and Family*, 57, 129-140.
- Rusting, C. L., & Nolen-Hoeksema, S. (1998). Regulating responses to anger: Effects of rumination and distraction on angry mood. *Journal of Personality and Social Psychology*, 74, 790-803.
- Seeman, T. E., Kaplan, G.A., Knudsen, L., Cohen, R., & Guralnik, J. (1987). Social network ties and mortality among the elderly in the Alameda County study. *American Journal of Epidemiology*, 126, 714-723.
- Segerstrom, S. C., Tsao, J. C. I., Alden, L. E., & Craske, M. G. (2000). Worry and rumination: Repetitive thought as a concomitant and predictor of negative mood. *Cognitive Therapy and Research*, 24, 671-688.
- Snijders, T. A. B., & Bosker, R. J. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel analysis*. Thousand Oaks, CA: Sage.
- Spasojevi, J., & Alloy, J. B. (2001). Rumination as a common mechanism relating depressive risk factors to depression. *Emotion*, 1, 25-37.

- Spasojevi, J., Alloy, J. B., Abramson, L. Y., MacCoon, D., & Robinson, M. S. (2004). Reactive rumination: Outcomes, mechanisms, and developmental antecedents. In C. Papageorgiou & A. Wells (Eds.), *Depressive rumination: Nature, theory, and treatment* (pp. 43-58). London: John Wiley & Sons.
- Stone, A. A., Shiffman, S., Schwartz, J. E., Broderick, J. E., & Hufford, M. R. (2003). Patient compliance with paper and electronic diaries. *Controlled Clinical Trials, 24*, 182-199.
- Tennen, H., Affleck, G., Coyne, J.C., Larsen, R.J., & DeLongis, A. (2006). Paper and plastic in daily diary research: Comment on Green, Rafaeli, Bolger, Shrout, and Reis (2006). *Psychological Methods, 11*, 112-118.
- Thoits, P. A. (1986). Social support as coping assistance. *Journal of Consulting and Clinical Psychology, 54*, 416-423.
- Thoits, P. A. (2005). Stress, coping and social support processes: Where are we? What next? *Journal of Health and Social Behavior* (Extra Issue), 53-79.
- Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology, 76*, 284-304.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*, 247-259.
- Turner, R. J., Frankel, B. G., & Levin, D. M. (1983). Social support: Conceptualization, measurement, and implications for mental health. In J. R. Greenley (Ed.), *Community and mental health, Volume III* (pp. 67-110). Greenwich, CT: JAI Press.
- Turner, J. R., Sorenson, A. M., & Turner, J. B. (2000). Social contingencies in mental health: A seven-year follow-up study of teenage mothers. *Journal of Marriage and Family, 62*, 779-791.
- Valentiner, D. P., Holahan, C. J., & Moos, R. H. (1994). Social support, appraisals of event controllability, and coping: An integrative model. *Journal of Personality and Social Psychology, 66*, 1094-1102.
- Watkins, E. (2004). Appraisals and strategies associated with rumination and worry. *Personality and Individual Differences, 37*, 679-694.
- Watkins, E., & Mason, A. (2002). Mood as input and rumination. *Personality and Individual Differences, 32*, 577-587.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior, 27*, 78-89.
- Wood, J. V., Saltzberg, J. A., Neale, J. M., Stone, A. A., & Rachmiel, T. A. (1990). Self-focused attention, coping responses, and distressed mood in everyday life. *Journal of Personality and Social Psychology, 58*, 1027-1036.
- Zeppa, A., & Norem, R. (1993). Stressors, manifestations of stress, and first-family/stepfamily group membership. *Journal of Divorce & Remarriage, 19*, 3-23.

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