# "Thanks for Sharing That": Ruminators and Their Social Support Networks

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Receiving positive social support after a trauma generally is related to better adjustment to the trauma. The personality of trauma survivors may affect the extent to which they seek social support, their perceived receipt of social support, and the extent to which they benefit from social support. The authors hypothesized that people with a ruminative coping style, who tended to focus excessively on their own emotional reactions to a trauma, compared to those without a ruminative coping style, would seek more social support, and would benefit more from social support, but would report receiving less social support. These hypotheses were confirmed in a longitudinal study of people who lost a loved one to a terminal illness.

When people experience a traumatic event, they often want to talk about the trauma and frequently turn to family members and friends for support (Rime, 1995). People who are able to talk about their trauma-related thoughts and feelings with supportive others experience a reduction in ruminative, intrusive thoughts about the trauma and improvements in health and well-being compared to people who are not able to talk about their traumas with others (Lepore, 1997; Lepore, Silver, Wortman, & Wayment, 1996; Pennebaker, 1989, 1995).

Some people have more ruminative thoughts about traumas than others, however. In particular, people with a ruminative style of coping have more distressing thoughts about the traumas or problems they experience and about their own emotional reactions to those traumas or problems (Lyubomirsky, Caldwell, & Nolen-Hoeksema, 1998; Nolen-Hoeksema & Morrow, 1991). In the present study we hypothesized that people with a ruminative coping style would be more likely than those without a ruminative coping style to reach out to others for social support because they had more ruminative thoughts to share. We also hypothesized that ruminators would benefit more from social support than nonruminators. Finally, we hypothesized that ruminators would report receiving less positive social support from others than nonruminators in part because they tend to violate social norms for how

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long one should continue talking about a trauma. The specific trauma faced by the participants in this study was the loss of a close loved one to a terminal illness.

## Social Support and Adjustment

When asked what kind of social support they want and need, trauma survivors often say they need to tell the story of their trauma over and over and to express their feelings about the trauma (Lehman, Ellard, & Wortman, 1986; Silver & Wortman, 1980). They may want their listeners to affirm that their way of understanding the trauma is right or good. They may also want to be told that they took the right actions during the trauma.

Confiding in others about a trauma does appear to facilitate recovery from the trauma. In a wide range of studies, Pennebaker and colleagues have shown that people who confide to others their deepest thoughts and feelings about traumas such as the death of a loved one, a sexual assault, or the divorce of their parents suffer fewer physical and mental health problems over time than people who do not (for reviews, see Pennebaker, 1989, 1993). Similarly, Lepore et al. (1996) found that mothers who lost an infant to sudden infant death syndrome (SIDS) reported decreases in emotional distress over time if they felt they could discuss their thoughts and feelings about the loss with others, whereas mothers who felt socially constrained from discussing their loss showed increases in emotional distress.

Social networks are not always supportive, however (Herbert & Dunkel-Schetter, 1992; House, 1981; Rook, 1984). Others may not want to hear about the trauma and may encourage the survivor not to talk or think about the trauma. Survivors may be criticized for thoughts or feelings they have about the trauma, or actions they took during the trauma. Even when people intend to be helpful, they may say or do things to the trauma survivor that hurt rather than help (House, 1981; Lehman et al., 1986; Thoits, 1982). In the heat of the moment—when faced with a distressed person— friends and family members often feel anxious and tongue tied. They may greatly fear saying the wrong thing or simply not know what to say. As a result, they may say nothing, or what they do or say may be delivered or taken in ways that are unhelpful.

When the trauma is the death of a loved one, family members and friends may find it especially difficult to listen empathically and affirm the thoughts and feelings of survivors. Support network members themselves are often grieving the loss and therefore may be less inclined to provide emotional support or less likely to be called on for support (Vachon & Stylianos, 1988). The loss of a loved one following a long illness presents its own complicating features that have implications for the provision and receipt of emotional support. Caregivers may harbor feelings of frustration toward family members who have not shouldered their share of the caregiving responsibilities, and guilt over the difficult decisions they are forced to make on the behalf of the terminally ill loved one, sometimes without the knowledge or support of other family members. These emotions are often suppressed or inhibited for fear that their expression may exacerbate an already difficult situation.

## Personality and Social Support

Although most social support studies have been concerned with the characteristics of people's social support networks, some theorists have argued that support seeking and perceptions of social support are aspects of, or influenced by, the personality of trauma survivors (Hobfoll & Freedy, 1990; Lakey & Cassady, 1990; Sarason et al., 1991). That is, some people will seek out social support more than others, and some people will see the supportive efforts of others as more helpful than others. In addition, the personality of the trauma survivor may affect the actual support offered by others in times of need.

One personality characteristic that seems likely to influence how much people seek social support, their receipt of positive emotional support, and how much they will benefit from social support, is a ruminative style of coping with distress (Nolen-Hoeksema, 1991). People with a ruminative coping style think repetitively and passively about their own emotional reactions to a trauma, focusing on their symptoms of distress ("I feel so lousy"; "I just can't concentrate") and worrying about the meanings of their distress ("Will I ever get over this?"; Lyubomirsky et al., 1998). In turn, people with a ruminative coping style show more prolonged depressive and anxiety reactions to traumas than people who do not ruminate (Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema, Parker, & Larson, 1994).

A ruminative coping style appears to be a stable individual-difference variable. Both daily diary studies and longitudinal survey studies spanning up to 1 year have shown that people are highly consistent in their tendency to ruminate or not about their distress emotions and the events connected to these emotions (Nolen-Hoeksema & Larson, 1999; Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema, Morrow, & Fredrickson, 1993). Thus, our conception of rumination differs from that of Lepore (1997), Pennebaker (1989), Janoff-Bulman (1992), and other trauma theorists who have defined and operationalized rumination as a process variable rather than an individual-difference variable. In addition, these theorists have tended to operationalize ruminations as intrusive thoughts primarily about the trauma, whereas our conception of rumination also highlights thoughts about one's emotional reactions to the trauma or to more chronic stressors, which may sometimes be intrusive, but which ruminators often report deliberately contemplating (Lyubomirsky & Nolen-Hoeksema,

1993). For example, ruminators have many thoughts such as "I'm a wreck," "I can't cope," and "What's wrong with me?"

Previous research has shown, however, that ruminators, as we define them, also have more of the intrusive, ruminative thoughts about a trauma described by trauma theories. For example, in a prospective study of people's reactions to the 1989 San Francisco area earthquake, we found that people who scored higher on a measure of trait rumination before the earthquake reported more ruminative thoughts about the earthquake and more thoughts about their emotional reactions to the earthquake in the 2 weeks after the earthquake than did nonruminators (Nolen-Hoeksema & Morrow, 1991). Thus, a ruminative coping style appears to be one personality characteristic that influences whether people will have intrusive, ruminative thoughts following traumas.

Because they are thinking more about their traumas and their distress, ruminators may be more likely than nonruminators to seek out others with whom to share these thoughts and feelings. In the earthquake study, ruminators, who had more earthquake- and distress-related ruminations, reported talking to others about the earthquake more in the weeks after it happened than those with a less ruminative coping style (Nolen-Hoeksema & Morrow, 1991). Relatedly, Lepore et al. (1996) found that mothers of infants who died from SIDS who had more ruminative, intrusive thoughts about their infants' deaths also had a greater desire to talk about their loss.

Ruminators may be even more likely than nonruminators to benefit from confiding in others and from positive emotional support. Ruminators are more likely than nonruminators to get caught in cycles of negative thinking about their trauma, which may make it difficult for them to come to some understanding and acceptance of the trauma (see Lyubomirsky et al., 1998; Lyubomirsky & Nolen-Hoeksema, 1993, 1995). Supportive others may help ruminators to challenge negative, irrational thoughts about the trauma, and to understand the trauma within their worldviews, thus reducing their ruminations and their emotional distress (Janoff-Bulman, 1992; Pennebaker & O'Heeron, 1984). In contrast, although nonruminators may also benefit from social support, they may not need it to the extent that ruminators do because they are less likely to have negative cycles of thinking about their traumas.

Ruminators are also more likely than nonruminators to have difficulty coping actively with their problems and engaging in effective problem solving (Lyubomirsky et al., 1998; Lyubomirsky & Nolen-Hoeksema, 1995; Nolen-Hoeksema et al., 1994). Supportive others may help ruminators engage in active coping and effective problem solving, thus reducing the problems they face in the wake of their trauma and their ruminations and emotional distress (Clark, 1993). On the other hand, ruminators may suffer even more than nonruminators from negative social interactions with family members and friends following a trauma, because ruminators tend to ruminate about these negative social interactions.

Ruminators may be especially unlikely to get the social support they want and need, however. There are socially prescribed timelines for recovery from trauma in most cultures (Pennebaker, 1993; M. Stroebe, Gergen, Gergen, & Stroebe, 1992; Wortman & Silver, 1989). Ruminators may be more likely than nonruminators to violate these social expectations and continue to talk about their trauma long after others want to listen. When they continue to

openly express and discuss their trauma and their feelings about the trauma after the socially prescribed time, their family members and friends may become annoyed or withdraw. Or family members and friends may pressure the ruminator with advice on how to "get on with life," perhaps infusing this advice with thinly veiled frustration or criticism (Coyne, Wortman, & Lehman, 1988). This may be met with more resistance and increasing anger by the ruminator, who may accuse family members and friends of not understanding or making the situation worse. A negative interactional cycle may be set up that is very difficult for either party to break (Coyne, 1976). Thus, ruminators may desire more social support than nonruminators, but they may be less likely to receive the social support they want because they continue to experience more trauma-related distress and share that distress with others, who perceive that ruminators should have "gotten over it by now" (see also Coates, Wortman, & Abbey, 1979; Lehman et al., 1986).

In the present study we tested the hypotheses that (a) people who tend to ruminate about their distress would reach out to others for support more than people who do not tend to ruminate about their distress; (b) ruminators would benefit more than nonruminators from positive emotional support, and suffer more from social friction, as reflected in their emotional distress following a trauma; and (c) ruminators would report receiving less positive social support and more social friction following a trauma than nonruminators. The trauma of interest in the current study was the recent loss of a close family member or friend to a terminal illness. Participants in this study were interviewed before their loss and again 1, 6, 13, and 18 months following the loss.

## Method

### Respondents and Procedure

Respondents were recruited through 11 hospices in the San Francisco Bay area. The hospices provided in-home care on an as-needed basis. Their functions included providing information, palliative care, 24-hr consultation and assistance, counseling and support services, and bereavement services.

To reduce sampling bias, a letter explaining the study was included in the hospice information packets that were given to families when they first engaged the hospice. The letter stated that their participation would be completely voluntary and in no way connected to receiving hospice services. The hospice nurse, social worker, or volunteer who first explained the hospice services to the family pointed out the letter and asked if the study team could call them to explain the study further. If the family member expressed interest in the study, he or she was contacted by a member of the study staff. Approximately 80% of those contacted agreed to participate.

In-person interviews were conducted by trained clinical psychology graduate students, and the structured interviews covered a variety of issues, only some of which are included in this report (for further information, see Davis, Nolen-Hoeksema, & Larson, 1998; Nolen-Hoeksema & Larson, 1999; Nolen-Hoeksema et al., 1994). All of the terminally ill family members were living at home at the time the respondents entered the study, and most died at home.

In total, 455 people participated in at least one wave of the study. Although it was our intention to interview all participants prior to the loss of their loved one, in some cases the loved one died before a preloss interview could be arranged. These participants nonetheless participated in postloss interviews. Of the 455 people who agreed to be in the study, 328 participated in a preloss interview on average 3 months (SD = 4.1) before their family member's death. Following the family member's death, 362

participants completed an interview approximately 1 month postloss (M = 1.49 months, SD = 0.73), 360 participated in an interview approximately 6 months postloss (M = 6.48 months, SD = 0.82), 313 participated in an interview 13 months postloss (M = 13.21 months, SD = 0.77), and 280 participated in an interview approximately 18 months postloss (M = 18.25 months, SD = 1.02).

The present report includes data from 349 respondents who participated in at least three of the five interviews. Forty-four percent of these 349 respondents participated in all five interviews, and 41% participated in four of the five interviews.[1] Of those participating in three or four interviews, the interview most commonly missed was the preloss interview (where 103/349 were missing data), followed by the 18-month postloss interview (where 70/349 were missing data).

Of the 349 participants in this report, 75.1% were female. The mean age of the respondents was 51.8 years (SD = 14.3). Median level of education was "some college," and median annual income was in the range of $30,000–$35,000. Most (81.8%) of the respondents were White, 6.4% were Mexican American, 3.2% were African American, and the remainder were of other ethnicities.

Seventy-two percent of the respondents were losing a loved one to cancer, 15% were losing a loved one to AIDS, and the remainder were losing a loved one to other causes (e.g., heart disease) or to causes unknown to the respondent. Thirty-nine percent of the respondents were losing a parent, 35% were losing a spouse or partner, 10% a child, 9% a sibling, and 7% another relative or very close friend. At the time of the preloss interview, the mean length of the loved one's illness was approximately 6 months (SD = 53 months). The mean age of the deceased at his or her time of death was 63.2 years (SD = 17.0).

Covarying these demographic variables from the analyses we report below had no substantive effect on the results we report (i.e., the beta weights in the models changed only slightly, and the pattern of significant effects was unchanged). To simplify presentation of results, the demographic variables are not included in the results reported below.

### Interview Protocol

*Depressive symptomatology.* Depressive symptoms were assessed approximately midway through each interview with the self-report Inventory to Diagnose Depression (IDD; Zimmerman & Coryell, 1987). The IDD is a symptom inventory similar to the Beck Depression Inventory, but it is

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[1] The bulk of our analyses use hierarchical linear modeling (HLM) techniques, which involve estimating within-subject slopes and intercepts and then predicting these slopes and intercepts from between-subject (individual-difference) factors. Given the models we wish to test, a minimum of three observations per person are necessary. HLM analyses conducted on the sample of respondents who participated in all five interviews (n = 152) yielded comparable, albeit weaker, results to those we report below. It should also be noted that in some cases more than 1 person per family participated in the study. Although each interview was conducted independently, it is possible that not all observations were truly independent. To test for any influence that this might have on the results we report below, we reran all analyses using a sample that included no more than one person per family. In the data, there were 29 families (61 participants) where 2 (in a few cases, 3) family members participated in three or more of the five interviews. In cases where more than 1 family member participated, the family member selected for inclusion was the one who participated in the most interviews. If more than 1 family member participated in an equal number of interviews, the participant who indicated that he or she was the primary caregiver was selected. If both or neither fit this criterion, one respondent was selected at random. Results of analyses with this reduced data set produced nearly identical results, and in only one case was a significant result found to be no longer significant using the reduced data set. This discrepancy in results is noted at the appropriate time below.

based on *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1987) criteria for diagnosing major depression. Zimmerman and colleagues have reported data indicating that the instrument is both valid and reliable (Zimmerman & Coryell, 1987; Zimmerman, Coryell, Corenthal, & Wilson, 1986). The time frame for symptoms in the present version is the past week. For the present purposes, we report the sum of the ratings for the 22 items.

*Ruminative coping style.* At each wave, the Response Styles Questionnaire (RSQ; cf. Nolen-Hoeksema & Morrow, 1991) was used to assess how participants tend to respond to their own symptoms of negative emotion. Interviewers read the following instructions to participants:

> People think and do many different things when they feel sad, blue or depressed. I'm going to read a list of possibilities. Turn to the next scale in your book and please tell me if you never, sometimes, often or always think or do each one when you feel down, sad, or depressed. Please indicate what you generally do, not what you think you should do.

The Ruminative Responses subscale of the RSQ includes 22 items describing responses to depressed mood that are self-focused (e.g., "I think 'Why do I react this way?' "), symptom focused (e.g., "I think about how hard it is to concentrate"), and focused on the possible consequences and causes of the mood (e.g., "I think 'I won't be able to do my job if I don't snap out of this' "). Previous studies have reported acceptable convergent and predictive validity for the Ruminative Responses subscale (Butler & Nolen-Hoeksema, 1994; Nolen-Hoeksema & Morrow, 1991). For example, participants' responses to this scale correlated significantly ($r = .62$) with their use of ruminative responses to depressed mood in a 30-day diary study. In addition, in a controlled laboratory study, participants who scored above the median on the scale were significantly more likely than participants who scored below the median to choose to engage in an emotion-focused task rather than a task unrelated to emotion while they were in a depressed mood.

In this study, the internal consistency of this scale (Cronbach's alpha) was $> .89$ in each of the five waves. Correlations across waves were also very high (intraclass correlation [$\rho$] = .75, $p < .001$), confirming the hypothesized stability of the coping style over time. Given this stability, we averaged across waves to obtain a single ruminative style score for each individual. We note, however, that although $\rho$ was very high, the sample mean for the Ruminative Responses subscale declined slightly but significantly over the course of the study ($b$ for time to/since the loss in months = $-0.006$, $SE = 0.001$, $t = -6.51$, $p < .001$).

*Social support measures.* Perceived social support was assessed at each wave with the Social Support and Activities Scale (O'Brien, Wortman, Kessler, & Joseph, 1993). Twenty-three items on this scale assess participants' sense of isolation from others and qualitative aspects of social support, such as others' willingness to listen and provide emotional and practical support as well as conflict with others. Each item is rated on a 5-point scale, with high scores representing more of the construct. The time referent was the past month.

Factor analyses of the person–wave data set (where data from each interview represent a separate record) yielded four factors that accounted for 56% of the variance in items. The four factors were identified as Isolation (5 items; e.g., "Have you felt isolated from others?", "Have you kept pretty much to yourself?"), Friction (7 items; e.g., "Have you felt irritated or resentful toward people in your personal life?", "Have people in your personal life really gotten on your nerves?"), Emotional Support (8 items; e.g., "Do people in your personal life approve of the way you do things?", "Do they give you the idea that it is alright to feel what you are feeling?"), and Practical Support (3 items; e.g., "Is there someone you could turn to if you needed to borrow several hundred dollars for a medical emergency?"). In the present study we were not concerned with the provision of practical support, so further discussion will focus only on the three remaining factors of support.

After unit weighting the items, we computed a mean score at each wave for each of the three retained subscales for each participant. Coefficients alpha for the Friction and Emotional Support subscales were consistently $> .80$ at each wave. Alphas for Isolation were consistently $> .70$ except for the preloss interview, when $\alpha = .47$.[2]

We computed intraclass correlations (ICCs) for each of the three subscales to evaluate the stability of the subscales. ICCs ranged from $\rho = .47$ (for Emotional Support) to $\rho = .59$ (for Friction). Although all ICCs were significantly greater than zero ($p < .001$), they were considerably more variable over time than were scores for ruminative coping style. Because of this variability, and because we were interested in change over time in social support, we did not aggregate social support scores across waves.

Emotional Support, Isolation, and Friction were significantly correlated with each other at each interview, but the sizes of these correlations varied considerably across interviews. The correlation of Emotional Support and Friction ranged from $r = -.33$ to $-.42$. The correlation of Emotional Support and Isolation ranged from $r = -.36$ to $-.51$. Isolation and Friction correlated in the range of $r = .40$ to .65 (all $ps < .001$). In addition, as we just noted, scores on these factors varied enough over time to consider them time-variant variables rather than time-invariant variables. Because of this variability in scores on the factors and in the correlations among factors, and because social support theorists have emphasized the distinct features of social support captured by these factors (Cohen & Wills, 1985; Helgeson & Cohen, 1996), we chose to consider them separately rather than aggregate them into one general social support factor.

*Comfort discussing loss.* Respondents rated their level of comfort discussing their loved one's death or illness at each interview on an 11-point scale where $0 = extremely\ uncomfortable$ and $10 = totally\ comfortable$. The ICC for this variable over the waves was $\rho = .55$, $p < .001$.

*Support-seeking behavior.* The extent to which respondents sought social support from one interview to the next was assessed with items from the Coping Response Inventory (CRI; Moos, Cronkite, Billings, & Finney, 1986), a self-report instrument designed to assess a range of both cognitive and behavioral coping efforts. In this report, our interest is restricted to the subscale that assesses support-seeking behaviors. This subscale assesses the extent to which respondents (a) talked with a spouse or other relative, (b) talked with a friend, (c) consulted a professional (e.g., doctor, priest), (d) prayed for guidance or support, and (e) sought help from persons or groups with similar experiences. Each of these five items was rated by the respondent on a 4-point scale (range: $0 = no/not\ at\ all$ to $3 = yes,\ fairly\ often$). Within-wave coefficients alpha ranged from .55 to .69. The ICC for support-seeking behaviors was $\rho = .52$.

## Results

### Attrition Analyses

Of the 106 respondents (i.e., $455 - 349$) who participated in fewer than three interviews and were thus excluded from our sample, 58.5% were excluded because they participated only in the preloss interview. Principal reasons for not participating beyond the first interview included that the loved one had not yet died by the end of the study, that the respondent could not be located, or that the respondent had chosen not to participate further in the study. A further 9.4% participated only in the first interview postloss. The remaining 32% participated in two waves: typically either Interviews 1 and 2 or 2 and 3. The most common reason

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[2] The weak alpha at preloss on this subscale did not unduly affect the magnitude of its correlation with other subscales, relative to the intersubscale correlations at other waves.

given by respondents for not participating in these interviews was that they were too busy.

To compare respondents who attrited from the study after fewer than three interviews with those who participated in at least three interviews, we conducted a series of $t$ tests on all study variables for which attrited respondents provided data (e.g., Wave 1 data, if they participated in this interview). No comparisons were made for variables measured beyond Wave 3 because no attrited respondents participated beyond this wave. Results of these analyses indicated that respondents who attrited from the study (a) were more ruminative, $t(453) = -3.94$, $p < .001$; (b) were less comfortable discussing the loss at Wave 1, $t(323) = 2.99$, $p < .01$; (c) reported greater social friction at Wave 1, $t(324) = -2.07$, $p < .05$; and (d) reported more isolation at Wave 1, $t(324) = 2.24$, $p < .05$. The groups did not differ significantly on level of depression at any wave.[3]

## Overview of HLM Analyses

We analyzed our data within the framework of an HLM (Bryk & Raudenbush, 1987, 1992), where interviews are nested within persons. In such a model, a regression equation is estimated for each individual from data that he or she contributes over the course of the study. A dependent variable for each individual thus is regressed onto predictors that vary over the course of the study for that individual, such as the date of each interview (deviated from the date of the loss) and the level of support one perceives at a given interview. Individual slopes and intercepts in this way are estimated from available data, provided respondents participated in at least three interviews. This constitutes the first level of the two-level hierarchical model.

The second level of the model involves regressing the individual-difference (or time-invariant) variables onto the slopes and intercepts estimated for each individual. For example, do the slopes and intercepts that describe the relation of support seeking with depression differ as a function of a person's general propensity to ruminate? In analysis-of-variance language, a main effect of rumination is indicated when the individual-difference variable significantly predicts the intercept. An interaction is indicated when the individual-difference variable significantly predicts a slope.

For instance, in the first step of the first analyses we present below, the extent to which each person was seeking support at each point in time is predicted from the time to/since the loss (in months) of an interview and level of depression at that interview. This (Level 1) portion of the HLM is represented with the equation:

$$\text{Support Seeking}_t = a_0 + a_1 Time_t + a_2 IDD_t + e_t,$$

where Support Seeking$_t$ is the extent to which a person sought support at time $t$, $a_0$ is the intercept, $a_1$ is the slope for the time to/since the loss effect, $Time_t$ is the time (in months) to/from the loss for the present interview (where negative values represent time prior to the loss and positive values represent time since the loss), $a_2$ is the slope for depression, $IDD_t$ is the person's level of depression at the present interview (deviated from his or her average level of depression over the course of the study), and $e_t$ is a random component of support at time $t$.

In the second (between-subject, or Level 2) portion of the model, the intercept ($a_0$) and slopes ($a_1$ and $a_2$) for each person are each predicted from individual differences in rumination scores. In this case, it is predicted that

$$a_{0_i} = b_0 + b_1 Rum_i + s_i,$$

where $a_{0_i}$ is the intercept for support seeking for person $i$ at the time of his or her loss ($t = 0$), controlling for depression; $b_0$ is the intercept for a person of average rumination (and thus represents the average score in support seeking for a person scoring at the mean on rumination at $t = 0$ and controlling for depression); $b_1$ indicates the degree to which a person's rumination score ($Rum_i$) accounts for variability in support seeking; and $s_i$ is a random error component for the prediction of the intercept $a_0$.

Comparable equations are estimated for the slopes $a_1$ and $a_2$. In these equations the $b_1$ slopes represent the degree to which a person's rumination score ($Rum_i$) predicts the relation of support seeking to time to/since the loss (for $a_1$) and level of depression (for $a_2$) and thus may be thought of as an interaction of the time-invariant factor (rumination) by the time-varying factors (time to/since the loss and current level of depression).

In the second set of HLM analyses we predicted level of depressive symptomatology at each wave from contemporaneous social support variables and individual differences in ruminative response style. The primary question of interest in these analyses was whether social support has differential ameliorative effects on level of depression for ruminators or nonruminators; that is, does one's relative level of social support correlate more strongly to changes in depression from last wave to this wave for ruminators versus nonruminators?

In the third set of HLM analyses we tested the hypothesis that, over time, ruminators will report less comfort discussing the loss, less emotional support, more friction, and greater social isolation than nonruminators. These social support variables represent our dependent variables, and the Level 1 and Level 2 equations are the same as those described above for support seeking.

## Predicting Support Seeking

Respondents who scored high on the Ruminative Responses subscale of the RSQ were more likely to seek support from others consistently over the course of the study, even after level of depressive symptoms was taken into account. Table 1 presents the results of an HLM in which support-seeking behavior is predicted

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[3] In response to questions raised by one reviewer, we tested the possibility that the respondents in our sample who did not participate in the preloss interview differed from those who were interviewed preloss on any study variables. Comparisons of the two groups on the rumination variable indicated that the two groups did not differ significantly ($t < 1$). We also considered whether those who did not participate in the preloss interview might differ in important ways on any of our other 1-month postloss variables from those who were interviewed preloss. No significant differences were observed for these groups on any of our variables of interest (i.e., depression, support seeking, emotional support, friction, isolation, and comfort discussing the loss; $ts < 1.4$, $ps > .15$). Thus, although some differences were found between people who eventually attrited from the study and those who did not (see text), no differences were found between people who participated in the preloss interview and those who did not.

Table 1

*Predicting Level of Support Seeking From Time To/Since the Loss and Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | b | SE | t |
|---|---|---|---|
| Intercept | 1.816 | 0.032 | 56.26**** |
| Rum | 0.287 | 0.076 | 3.77**** |
| Time | −0.020 | 0.002 | −9.37**** |
| Rum | 0.004 | 0.005 | 0.79 |
| IDD | 0.006 | 0.003 | 2.19** |
| Rum | 0.000 | 0.005 | 0.03 |

*Note.* $N = 347$. Time to/since the loss (in months) is deviated from date of the loss. Inventory to Diagnose Depression (IDD) is the depression score deviated about each person's mean. Rum is the individual-difference variable, ruminative coping style, mean deviated over the sample. The regression coefficients (*b*s) for Rum indicate the relation of Rum to the intercept, time slope, and IDD slope. For example, people who were more ruminative tended to score higher on support-seeking at the intercept ($b = 0.287$). Time to/since the loss predicted level of support seeking ($b = -0.020$, such that support seeking declined with greater time since the loss), and individual differences in rumination did not moderate this relationship significantly ($b = 0.004$).
** $p < .05$.  **** $p < .001$.

at each wave from rumination score (time invariant), time since the loss, and contemporaneous IDD (depression) score. Note that the IDD has been centered around each person's mean, and rumination scores have been mean centered for the sample. The data indicate that, controlling for current level of distress, high ruminators had a higher intercept for support-seeking behavior than low ruminators ($b = 0.287$, $SE = 0.076$, $t = 3.77$, $p < .001$). Although support-seeking behavior declined significantly over the 18 months after the loss for the sample as a whole ($b = -0.020$, $SE = 0.002$, $t = -9.37$, $p < .001$), the magnitude of the slope did not differ significantly for ruminators and nonruminators ($b = 0.004$, $SE = 0.005$, $t < 1$).

## Effects on Depression of Social Support for High and Low Ruminators

In the next set of analyses we constructed HLMs to assess the effect of each social support variable on changes in level of depression. The Level 1 (within-subject) portion of the model was specified as

$$IDD_t = a_0 + a_1 Time_t + a_2 Support_t + a_3 IDD_{t-1} + e_t,$$

where $IDD_t$ represents level of depression at postloss interview at time $t$; $a_0$ is the intercept; $a_1$ is the slope for the time since the loss; $Time_t$ is the time since the loss for the present interview (in months); $a_2$ is the slope for the social support (defined as a different aspect of support in each of the analyses); $Support_t$ is the level of support perceived at the interview conducted at time $t$, deviated from the person's average level of support over the course of the study; $a_3$ is the slope for the previous wave's depression level; $IDD_{t-1}$ is the person's depression score at the previous interview, deviated from his or her average level of depression over the course of the study; and $e_t$ is a random component of support at time $t$. Because the model includes depression score at the prior interview as a predictor, and because our sample was

interviewed only once preloss, we are restricted here to predicting IDD at postloss only.

In the Level 2 (between-subjects) portion of the model, the intercept ($a_0$) and slopes ($a_1$, $a_2$, and $a_3$) generated in the Level 1 portion of the model are each predicted from individual differences in rumination scores as in the model presented above. As our interest is in the differential effect of social support on level of depression for high versus low ruminators, the key result of interest in each model is the relation of ruminative coping style to the slope for the social support variable. That is, do individual differences in rumination tendencies predict the extent to which social support variables relate to changes in level of depression? Note in these models that social support variables at each wave are deviated about each person's mean level of support over the course of the study and that these effects take into account the prior wave's level of depression and time since the loss. Thus, these models test whether the relationship between social support at a given interview and change in depression in the months prior to that interview is different for ruminators and nonruminators.

Table 2 summarizes the results of the HLM predicting level of depression from individual differences in ruminative coping style (time invariant), time since the loss, mean deviated level of support-seeking behavior, and prior wave's level of depression (mean deviated; all time varying). Consistent with past research (e.g., Nolen-Hoeksema & Morrow, 1991), high ruminators reported more symptoms of depression over the course of the study than did nonruminators ($b = 14.220$, $SE = 1.069$, $t = 13.30$, $p < .001$). Also evident is a significant effect of time, such that depression was higher immediately following the loss than at the later postloss interviews ($b = -0.403$, $SE = 0.029$, $t = -13.78$, $p < .001$). The slope for time since the loss, however, was steeper for high ruminators than for low ruminators ($b = -0.229$, $SE = 0.070$, $t = -3.27$, $p = .001$; see Figure 1).

Table 2 also shows that higher levels of support seeking were associated with greater depression ($b = 0.880$, $SE = 0.362$, $t = 2.43$, $p < .05$). The relation between support seeking and

Table 2

*Predicting Level of Depression Score From Time Since the Loss, Level of Support Seeking, and Prior Wave's Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | b | SE | t |
|---|---|---|---|
| Intercept | 16.119 | 0.451 | 35.74**** |
| Rum | 14.220 | 1.069 | 13.30**** |
| Time | −0.403 | 0.029 | −13.78**** |
| Rum | −0.229 | 0.070 | −3.27**** |
| Support seeking | 0.880 | 0.362 | 2.43** |
| Rum | 0.582 | 0.840 | 0.69 |
| IDD $t − 1$ | −0.029 | 0.034 | −0.85 |
| Rum | −0.031 | 0.075 | −0.42 |

*Note.* $N = 347$. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time since the loss (in months) is deviated from date of the loss. Level of support seeking is deviated about each person's mean, as is Inventory to Diagnose Depression (IDD) at $t - 1$. The regression coefficients (*b*s) for Rum indicate the relation of Rum to the intercept, time slope, support-seeking slope, and IDD $t - 1$ slope.
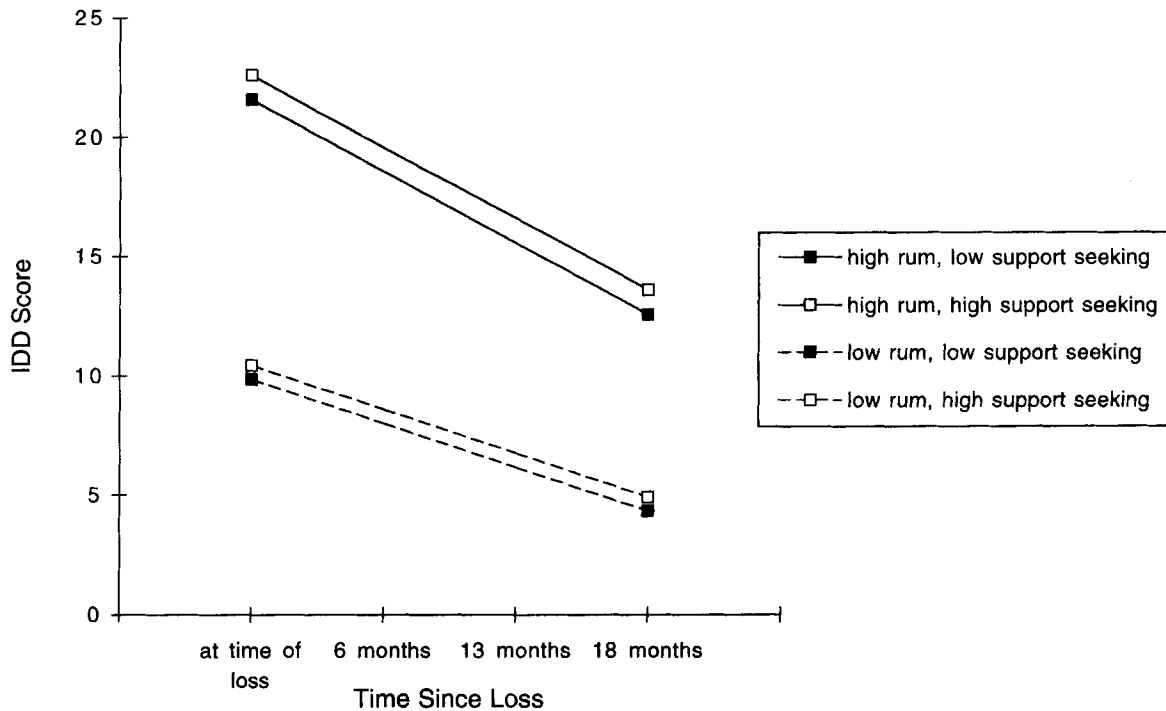** $p < .05$.  **** $p \le .001$.

*Figure 1.* Depression as a function of ruminative coping style and social support seeking postloss. $N = 347$. Means and slopes were estimated from hierarchical linear models. Rumination (rum) is time invariant. Time since loss, previous wave's Inventory to Diagnose Depression (IDD) score, and level of support seeking are time varying. high $= +1$ $SD$ of mean; low $= -1$ $SD$ of mean.

depression did not differ for high and low ruminators ($b = 0.582$, $SE = 0.840$, $t < 1$), meaning that both ruminators and nonruminators who sought more social support were more depressed. Figure 1 displays the estimated levels of depression for persons $\pm 1$ $SD$ from the mean on ruminative coping style when their level of support seeking is $\pm 1$ $SD$ of their individual means for support seeking. The means in Figure 1 are estimated from the expanded regression equation where we assume depression at the previous wave ($IDD_{t-1}$) is at the person's mean.

Table 3 summarizes the results of the HLM predicting level of depression from individual differences in ruminative coping style (time invariant), as well as time since the loss, mean deviated level of emotional support, and prior wave's level of depression (mean deviated; all time varying). Table 3 shows that higher levels of emotional support were associated with lower levels of depression ($b = -2.253$, $SE = 0.550$, $t = -4.10$, $p < .001$). It is important, however, that the relation between emotional support and depression was different for high and low ruminators ($b = -4.135$, $SE = 1.439$, $t = -2.87$, $p < .01$). What these results indicate is that among high ruminators, higher levels of emotional support at a particular wave (relative to the level of support they perceived at other waves) is associated with significantly lower levels of depression, even after controlling for prior level of depression. When high ruminators perceived that they were receiving positive emotional support, their level of depression dropped significantly. Among low ruminators, higher levels of emotional support at a particular wave were not at all associated with levels

of depression at that wave. Figure 2 gives an indication of the magnitude of the change in depression for high ruminators ($+1$ $SD$ from the mean on ruminative coping style) and low ruminators ($-1$ $SD$ from the mean) when emotional support is

Table 3

*Predicting Level of Depression Score From Time Since the Loss, Level of Emotional Support, and Prior Wave's Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | $b$ | $SE$ | $t$ |
|---|---|---|---|
| Intercept | 16.342 | 0.445 | 36.72**** |
| Rum | 14.828 | 1.058 | 14.02**** |
| Time | −0.433 | 0.027 | −16.04**** |
| Rum | −0.308 | 0.065 | −4.71**** |
| Emotional support | −2.253 | 0.550 | −4.10**** |
| Rum | −4.135 | 1.439 | −2.87*** |
| IDD $t - 1$ | −0.024 | 0.033 | −0.73 |
| Rum | −0.070 | 0.073 | −0.97 |

*Note.* $N = 336$. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time since the loss (in months) is deviated from date of the loss. Level of emotional support is deviated about each person's mean, as is Inventory to Diagnose Depression (IDD) at $t - 1$. The regression coefficients ($b$s) for Rum indicate the relation of Rum to the intercept, time slope, emotional support slope, and IDD $t - 1$ slope.
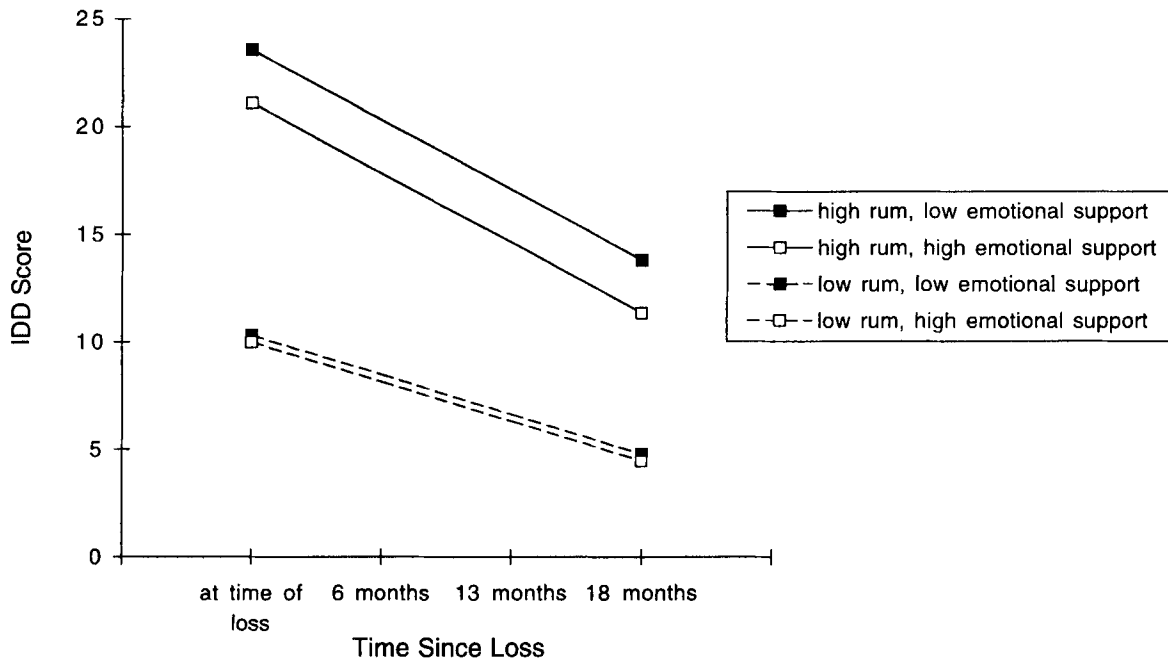*** $p < .01$. **** $p < .001$.

*Figure 2.* Depression as a function of ruminative coping style and emotional support. $N = 336$. Means and slopes were estimated from hierarchical linear models. Rumination (rum) is time invariant. Time since loss, previous wave's Inventory to Diagnose Depression (IDD) score, and level of emotional support are time varying. high $= +1$ $SD$ of mean; low $= -1$ $SD$ of mean.

perceived as present or lacking (i.e., $\pm 1$ $SD$ of their mean for emotional support).

In the next model, social friction replaces emotional support as a predictor variable. In this case, social friction related positively to level of depression ($b = 3.571$, $SE = 0.473$, $t = 7.56$, $p < .001$; see Table 4). Thus, higher levels of social friction were associated with higher levels of depression. However, Table 4 also indicates

Table 4
*Predicting Level of Depression Score From Time Since the Loss, Level of Social Friction, and Prior Wave's Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | $b$ | $SE$ | $t$ |
|---|---|---|---|
| Intercept | 16.405 | 0.448 | 36.62**** |
| Rum | 14.493 | 1.060 | 13.67**** |
| Time | −0.440 | 0.027 | −16.01**** |
| Rum | −0.265 | 0.065 | −4.07**** |
| Social friction | 3.571 | 0.473 | 7.56**** |
| Rum | 3.283 | 1.146 | 2.87*** |
| IDD $t - 1$ | −0.093 | 0.032 | −2.88*** |
| Rum | −0.113 | 0.070 | −1.61 |

*Note.* $N = 340$. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time since the loss (in months) is deviated from date of the loss. Level of social friction is deviated about each person's mean, as is Inventory to Diagnose Depression (IDD) at $t - 1$. The regression coefficients ($b$s) for Rum indicate the relation of Rum to the intercept, time slope, social friction slope, and IDD $t - 1$ slope.
*** $p < .01$.    **** $p < .001$.

that the slope of the friction-to-depression association for each participant was related to the extent to which the person was a ruminative coper ($b = 3.283$, $SE = 1.146$, $t = 2.87$, $p < .01$); that is, among high ruminators, high levels of social friction at a particular wave were associated with significantly higher levels of depression. When friction was relatively absent, levels of depression showed significant declines. Among low ruminators, the association of friction to depression was significantly weaker (see Figure 3).

This pattern of results is also found for social isolation. Results indicate that isolation was related positively to level of depression ($b = 3.210$, $SE = 0.450$, $t = 7.14$, $p < .001$) and that the individual slopes of this isolation-to-depression association are predictable from individual differences in ruminative response styles ($b = 2.408$, $SE = 1.061$, $t = 2.27$, $p < .05$; see Table 5). Among more ruminative persons, the link between isolation and depression was considerably stronger than was the link between isolation and depression for less ruminative persons (see Figure 4).

This pattern of results is also found for respondents' level of comfort discussing the loss. Comfort discussing the loss related negatively to level of depression ($b = -0.359$, $SE = 0.116$, $t = -3.09$, $p < .01$), and the individual slopes of this comfort-discussing-to-depression association are predictable from individual differences in ruminative response styles ($b = -0.790$, $SE = 0.235$, $t = -3.36$, $p = .001$; see Table 6). Among more ruminative persons, the link between comfort discussing the loss and depression was considerably stronger than was the link between these two variables for less ruminative persons (see Figure 5).
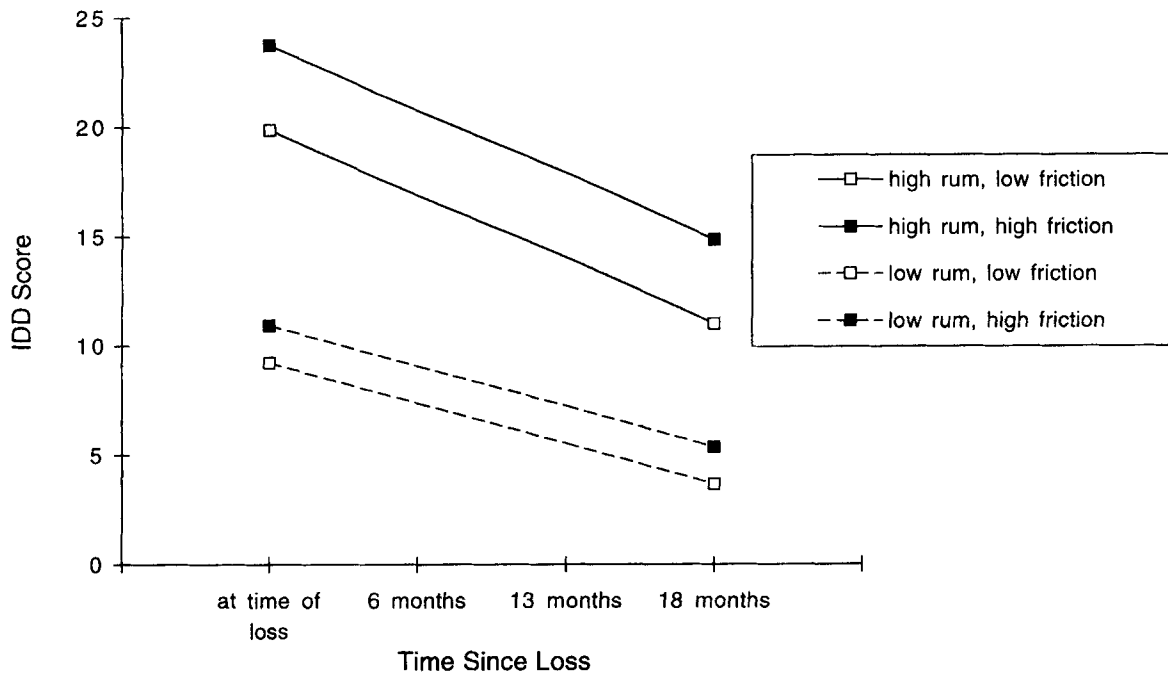
*Figure 3.* Depression as a function of ruminative coping style and social friction. *N* = 340. Means and slopes were estimated from hierarchical linear models. Rumination (rum) is time invariant. Time since loss, previous wave's Inventory to Diagnose Depression (IDD) score, and level of social friction are time varying. high = +1 *SD* of mean; low = −1 *SD* of mean.

## High and Low Ruminators' Perceptions of the Social Support They Receive

Although high ruminators were more likely to seek support over the course of the study, these respondents were less likely to report receiving emotional support, were more likely to perceive friction in their relationships, and were more likely to feel isolated from support providers. They were also less likely

Table 5

*Predicting Level of Depression Score From Time Since the Loss, Level of Isolation, and Prior Wave's Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | *b* | *SE* | *t* |
|---|---|---|---|
| Intercept | 16.441 | 0.450 | 36.58**** |
| Rum | 14.408 | 1.064 | 13.54**** |
| Time | −0.445 | 0.029 | −15.27**** |
| Rum | −0.254 | 0.069 | −3.66**** |
| Isolation | 3.210 | 0.450 | 7.14**** |
| Rum | 2.408 | 1.061 | 2.27** |
| IDD *t* − 1 | −0.183 | 0.033 | −5.57**** |
| Rum | −0.109 | 0.073 | −1.49 |

*Note.* *N* = 341. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time since the loss (in months) is deviated from date of the loss. Level of isolation is deviated about each person's mean, as is Inventory to Diagnose Depression (IDD) at *t* − 1. The regression coefficients (*bs*) for Rum indicate the relation of Rum to the intercept, time slope, isolation slope, and IDD *t* − 1 slope. ** *p* < .05. **** *p* < .001.

to feel comfortable discussing the loss. These results are summarized in Tables 7 and 8.

Table 7 indicates that high ruminators reported receiving less emotional support over the course of the study (*b* = −0.206, *SE* = 0.058, *t* = −3.58, *p* = .001), perceived greater social friction in their relationships (*b* = 0.832, *SE* = 0.068, *t* = 12.22, *p* < .001), and perceived themselves to be more isolated from supportive relationships than nonruminators (*b* = 0.775, *SE* = 0.075, *t* = 10.36, *p* < .001). Although levels of emotional support declined significantly over the course of the study for the sample as a whole (*b* = −0.006, *SE* = 0.002, *t* = −3.15, *p* < .01), the levels did not decline at a faster rate for high ruminators relative to low ruminators (*b* = −0.002, *SE* = 0.005, *t* < 1). Unlike levels of emotional support, which declined over time, levels of social friction showed slight (but significant) increases over the course of the study (*b* = 0.007, *SE* = 0.002, *t* = 3.35, *p* = .001). Mean levels of isolation reported by participants remained relatively constant over the course of the study (*b* = −0.001, *SE* = 0.002, *t* < 1).

Table 8 indicates that at the time of the loss, high ruminators were less comfortable discussing the loss than were nonruminators (*b* = −0.531, *SE* = 0.254, *t* = −2.09, *p* < .05).[4] Although both high and low ruminators became more comfortable discussing the loss with the passage of time since the loss, the rate at which high ruminators became comfortable talking about the loss was lower (marginally) than the rate for low ruminators (*b* = −0.026,

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[4] This is the one difference that is not significant when the analyses are based on a sample reduced in number to include only 1 person per family (*b* = −0.402, *SE* = 0.269, *t* = −1.49, *p* > .10).
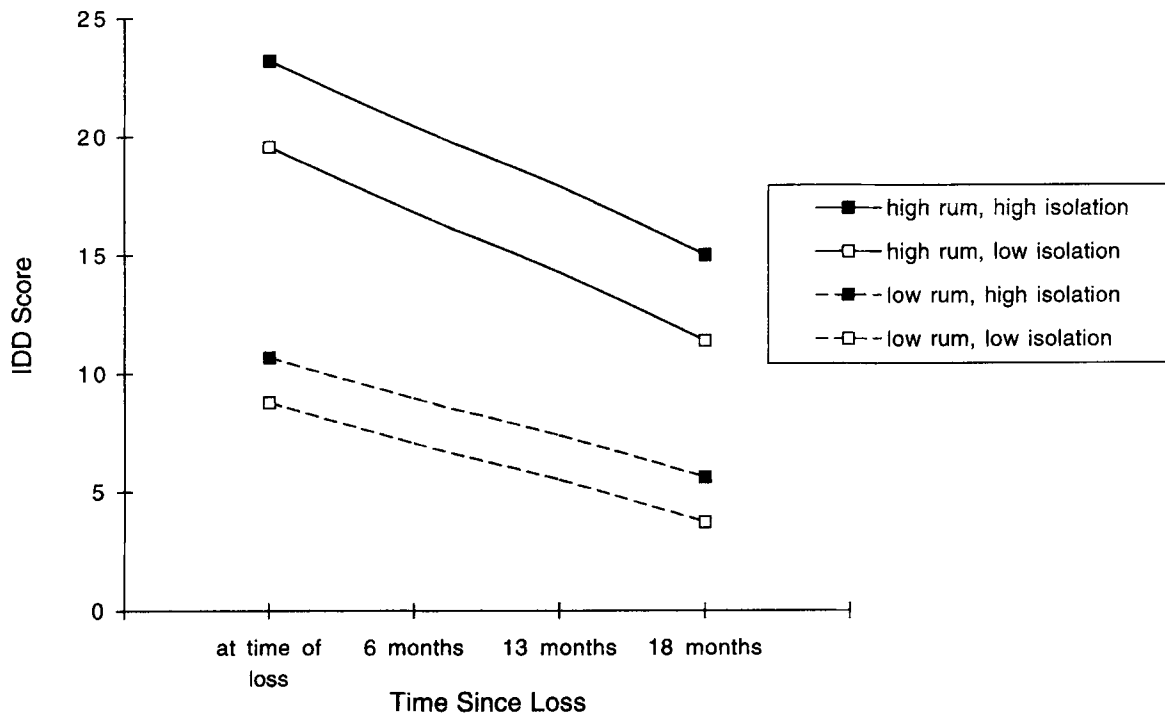
*Figure 4.* Depression as a function of ruminative coping style and isolation. $N = 341$. Means and slopes were estimated from hierarchical linear models. Rumination (rum) is time invariant. Time since loss, previous wave's Inventory to Diagnose Depression (IDD) score, and level of isolation are time varying. high $= +1$ $SD$ of mean; low $= -1$ $SD$ of mean.

$SE = 0.014$, $t = -1.87$, $p < .07$). We obtained these results after covarying depression.

## Discussion

Although reaching out to others is a common strategy for coping with loss, it appears to be a more common strategy among rumi-

Table 6
*Predicting Level of Depression Score From Time Since the Loss, Level of Comfort Discussing the Loss, and Prior Wave's Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | $b$ | $SE$ | $t$ |
|---|---|---|---|
| Intercept | 16.244 | 0.447 | 36.36**** |
| Rum | 14.309 | 1.057 | 13.53**** |
| Time | -0.420 | 0.028 | -14.82**** |
| Rum | -0.241 | 0.067 | -3.57**** |
| Comfort discussing | -0.359 | 0.116 | -3.09*** |
| Rum | -0.790 | 0.235 | -3.36**** |
| IDD $t - 1$ | -0.039 | 0.034 | -1.15 |
| Rum | -0.084 | 0.076 | -1.12 |

*Note.* $N = 347$. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time since the loss (in months) is deviated from date of the loss. Level of comfort discussing the loss is deviated about each person's mean, as is Inventory to Diagnose Depression (IDD) at $t - 1$. The regression coefficients ($b$s) for Rum indicate the relation of Rum to the intercept, time slope, comfort-discussing-the-loss slope, and IDD $t - 1$ slope.
*** $p < .01$. **** $p \leq .001$.

nators than nonruminators. The relationship between support seeking and rumination held even when we statistically controlled for levels of distress. Thus, although ruminators were more distressed than nonruminators, this did not account for their seeking more social support. Rather, ruminators may seek out others for support following a loss because they are more actively and persistently thinking about their loss, its meanings, and their own reactions to the loss than nonruminators are, and they want to share these thoughts with others.

Supportive relationships with others appear to help ruminators. When ruminators were well integrated into a social network, received emotional support from the people in that network, and felt comfortable discussing their loss with people in their network, they were less distressed throughout the 18 months following their loss. The support of others may help ruminators cope with their grief-related distress and concerns more actively and effectively, thereby contributing to their lower levels of distress. For example, supportive others may help a ruminating widow engage in active problem solving when dealing with financial problems she faces following a loss, rather than only ruminating about those problems. Supportive others may also help ruminators "work through" questions about the meaning of their loss (Greenberg, 1995). For example, family members and friends may help a ruminating father accept the loss of his child and understand it in the context of his existing worldviews. They may do this by talking with the ruminating father about his religious or philosophical beliefs and how these beliefs help him to understand his loss. Or, simply telling the story of his loss over and over to emotionally supportive others may help the ruminating father to habituate to the story and
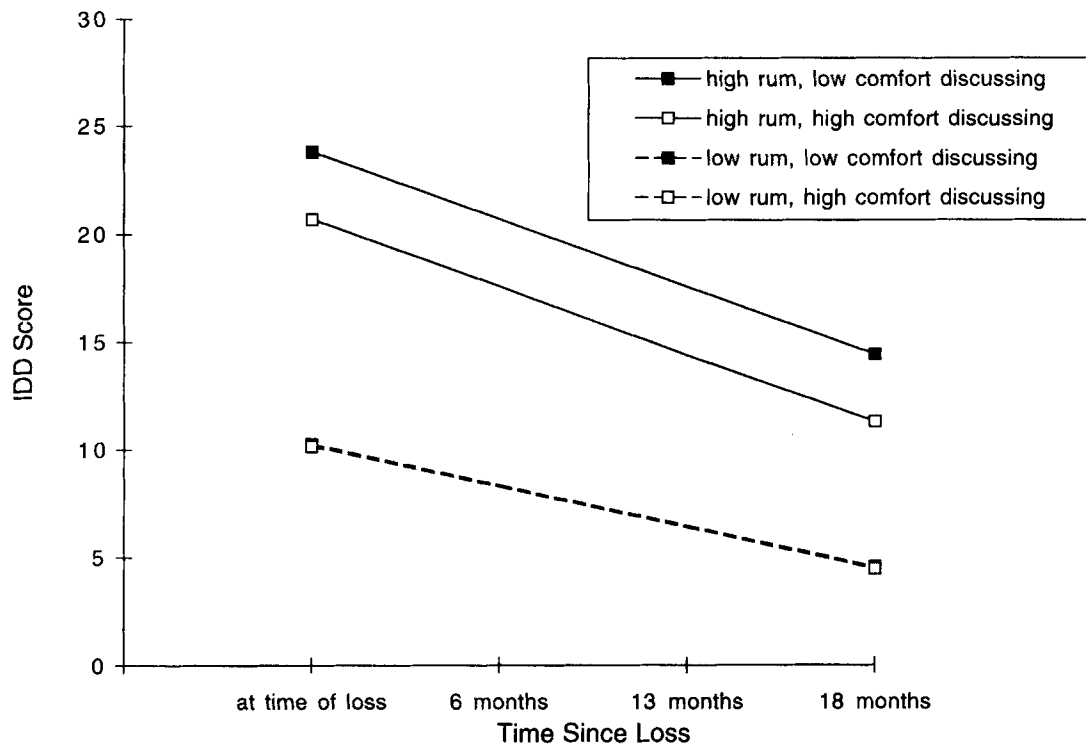
*Figure 5.* Depression as a function of ruminative coping style and comfort discussing loss. $N = 347$. Means and slopes were estimated from hierarchical linear models. Rumination (rum) is time invariant. Time since loss, previous wave's Inventory to Diagnose Depression (IDD) score, and level of comfort discussing loss are time varying. high = +1 $SD$ of mean; low = −1 $SD$ of mean.

shape the story to fit his belief system (Janoff-Bulman, 1992; Rachman, 1980).

On the other hand, having nonsupportive others who create friction rather than reduce stress appears to make it more difficult for ruminators to overcome their grief-related distress. When ruminators reported that their family members or friends were critical of them, did not agree with important decisions they had made, or were otherwise in conflict with them, they were more distressed than when they experienced less friction in their social network.

Social friction may represent more than just the absence of positive emotional support: Critical or hostile responses from others may give ruminators more troubles to ruminate about and raise more questions in their minds about their own behaviors or emotional reactions. For example, a ruminator who lost a sister might wonder if she should have taken more time off to be with her sister while she was alive or if she will suffer the same early death as her sister. If this same ruminating woman is also told by other family members that she was not around enough when her sister was ill and

Table 7

*Predicting Perceptions of Emotional Support, Friction, and Isolation From Time To/Since the Loss and Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | Emotional support | | | Friction | | | Isolation | | |
|---|---|---|---|---|---|---|---|---|---|
| | *b* | *SE* | *t* | *b* | *SE* | *t* | *b* | *SE* | *t* |
| Intercept | 4.448 | 0.024 | 182.65**** | 1.993 | 0.029 | 69.34**** | 2.244 | 0.032 | 70.85**** |
| Rum | −0.206 | 0.058 | −3.58**** | 0.832 | 0.068 | 12.22**** | 0.775 | 0.075 | −10.36**** |
| Time | −0.006 | 0.002 | −3.15*** | 0.007 | 0.002 | 3.35**** | −0.001 | 0.002 | −0.50 |
| Rum | −0.002 | 0.005 | −0.46 | 0.003 | 0.005 | 0.53 | 0.006 | 0.005 | 1.25 |
| IDD | −0.008 | 0.002 | −3.31**** | 0.022 | 0.003 | 7.88**** | 0.022 | 0.002 | 9.15**** |
| Rum | 0.001 | 0.005 | 0.23 | 0.000 | 0.006 | −0.01 | −0.001 | 0.005 | −0.25 |

*Note.* Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time to/since the loss (in months) is deviated from date of the loss. IDD = Inventory to Diagnose Depression score, deviated about each person's mean. The regression coefficients (*b*s) for Rum indicate the relation of Rum to the intercept, time slope, and IDD slope.
*** $p < .01$. **** $p \leq .001$.

Table 8

*Predicting Level of Comfort Discussing the Illness and Loss From Time To/Since the Loss and Level of Depression as a Function of Individual Differences in Ruminative Coping Style*

| Predictor | b | SE | t |
|-----------|-------|-------|-----------|
| Intercept | 8.150 | 0.108 | 75.69**** |
| Rum | -0.531 | 0.254 | -2.09** |
| Time | 0.017 | 0.006 | 2.75*** |
| Rum | -0.026 | 0.014 | -1.87* |
| IDD | -0.014 | 0.008 | -1.76* |
| Rum | -0.043 | 0.016 | -2.65*** |

*Note.* N = 347. Rum is the individual-difference variable, ruminative coping style, mean-deviated over the sample. Time to/since the loss (in months) is deviated from date of the loss. IDD = Inventory to Diagnose Depression score, deviated about each person's mean. The regression coefficients (bs) for Rum indicate the relation of Rum to the intercept, time slope, and IDD slope.
* p < .10. ** p < .05. *** p < .01. **** p < .001.

that the family "has the genes" for the disease that killed her sister, this will encourage the ruminating woman's existing ruminations and give her new concerns about which to ruminate. These ruminations then can exacerbate and prolong her distress.

Among nonruminators, good social support was generally associated with less distress, but these effects were small compared to the effects of social support on distress among ruminators. Indeed, for people one or more standard deviations below the mean on rumination, there was no effect of social support on distress. This may seem to contradict the wealth of previous studies showing a relationship between perceived social support and distress, but most of those previous studies did not examine the moderating effect of personality characteristics on the relationship between social support and distress. Nonruminators may need social support less because they are less prone to falling into negative cycles of thinking and inadequate problem-solving patterns when distressed and thus would be better able to accept their loss and re-engage in life after their loss even in the absence of positive social support.

On the other hand, ruminators may need social support more than nonruminators because they have more questions and concerns to deal with following a stressor such as a loss. Ruminators may also benefit more from social support because they are less likely than nonruminators to be engaging in active problem solving (Nolen-Hoeksema & Larson, 1999; Nolen-Hoeksema & Morrow, 1991). In addition, rumination interferes with good problem solving (Lyubomirsky & Nolen-Hoeksema, 1995), so even when ruminators engage in problem solving, they may be doing a poorer job of it than nonruminators. Thus, ruminators may need others to push them to take action on the concrete problems they are facing and to help them be effective in their problem solving. Finally, ruminators are less likely than nonruminators to engage in everyday instrumental activities that can lift distress somewhat and provide a sense of control or accomplishment, such as doing a hobby or maintaining an exercise program (Lyubomirsky & Nolen-Hoeksema, 1993). Taking "breaks" from grieving by engaging in such activities appears to facilitate long-term adjustment to loss, however (M. Stroebe & Schut, 1999). Thus, ruminators may need others to encourage and accompany them as they begin to resume everyday activities following a loss.

Each of these possible explanations for the greater relationship between social support and distress among ruminators compared to nonruminators has received partial support in previous studies (e.g., Lyubomirsky et al., 1998; Lyubomirsky & Nolen-Hoeksema, 1995; Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema et al., 1994). They cannot be tested directly in the current study and are important foci for future studies.

Unfortunately, despite their greater desire for social support, ruminators perceive that they are receiving less social support than do nonruminators. Throughout this study, people who were more ruminative rated the quality of their social support as lower than those who were less ruminative. This correlation remained significant even when we controlled for levels of distress. People may be less supportive of ruminators than nonruminators because ruminators go over and over their loss and persistently discuss their feelings and grief-related symptoms without making much progress toward "resolving" their loss. Although family members and friends may want to be supportive of the ruminator, it is difficult emotionally and physiologically to listen to others recount a trauma and their feelings about the trauma (Shortt & Pennebaker, 1992). Thus, they may withdraw from the ruminator, become annoyed with him or her, dismiss the ruminator's concerns, or criticize the ruminator for continuing to ruminate (see also Lehman et al., 1986).

We cannot know whether family members and friends were truly less supportive of ruminators than of nonruminators or if the ruminators just perceived them as less supportive because they wanted or needed more social support than nonruminators. It is important to emphasize that the relationship between rumination and perceived social support was strong after we controlled for levels of distress, suggesting that this relationship is not due simply to the biasing effects of higher levels of distress on ruminators' reports of their social support.

Still, perceptions of social support may be an individual-difference variable just as rumination is (Lakey & Cassady, 1990; Sarason et al., 1991); that is, some people may perceive others as unsupportive regardless of the objective level of support those others provide, whereas other people are more generous in their evaluations of the supportiveness of family or friends. Ruminators may generally see others as less supportive than nonruminators because ruminators see the world more negatively than nonruminators do (Lyubomirsky et al., 1998; Lyubomirsky & Nolen-Hoeksema, 1995; Nolen-Hoeksema et al., 1994). Similarly, the greater relationship between perceived social support and distress among the ruminators compared to the nonruminators may have resulted because ruminators' thoughts and evaluations are more influenced by their distress than nonruminators' are. When distressed, ruminators' thoughts demonstrate a greater spreading activation of negativity than do those of nonruminators, with more negative memories of the past, evaluations of their current situation, and predictions of their future coming to mind the more they ruminate (Lyubomirsky et al., 1998; Lyubomirsky & Nolen-Hoeksema, 1995). This could lead to increasingly negative perceptions of their social environment. It also could lead ruminators to behave in a more hostile way toward others, creating true social friction in their environment.

Over the 18 months following the loss, nonruminators reported more of an increase in their comfort in discussing their loss than ruminators did. Nonruminators may be more comfortable discuss-

ing their loss with time than ruminators, but over time they actually may be less likely to bring it up in social conversations because they have moved on to new roles and activities and have fully accepted their loss. In contrast, ruminators may not become as comfortable talking about their loss over time because they perceive that others disapprove of their continuing need to discuss the loss far beyond the socially sanctioned time period for the expression of grief.

Both ruminators and nonruminators reported that, over the 18 months following their loss, their social networks became less emotionally supportive and that there was more friction in their networks. Again, as the time since the loss increases, family members and friends may become less and less willing to support the bereaved person, perhaps because they have adjusted to the loss and believe that the bereaved person should also have adjusted. Many of the participants in this study commented in the interviews at 13 and 18 months postloss that our interviewers were the only ones in their lives who seemed willing to talk to them about the loss. All their other family members and friends thought they "should be over it" by then (Nolen-Hoeksema & Larson, 1999).

Rumination was a highly stable individual-difference characteristic in this study, as it has been in others (Nolen-Hoeksema & Morrow, 1991; Nolen-Hoeksema et al., 1993). Although ruminators might have a great deal more to ruminate about shortly after their loss than long after, the tendency to ruminate appears to persist even when the acute trauma of the loss has passed. In contrast, nonruminators may typically not fall into ruminative patterns even when faced with a trauma such as a major loss.

## Limitations and Strengths

Correlational studies such as this one must always be interpreted cautiously. In all the results discussed here, we statistically controlled for the influence of levels of distress on people's reports of their social support and ruminative tendencies, thus reducing concerns about the role of distress as a third variable in the relationships we reported. The design of this study allowed us to test our hypotheses longitudinally as well as cross-sectionally and to use HLM analyses to detect trends over time. Still, all the results are correlational, and thus causal interpretations cannot be made definitively.

The sample for this study was large and heterogeneous compared to those in many other bereavement studies. Because we obtained the sample from families using noninstitutionalized hospices, however, it does not represent all bereaved people. Our results might have been different if we had sampled people who experienced a sudden loss instead of an anticipated loss, or people who had not been associated with hospices. We know anecdotally that only a very small minority of people in this study maintained any contact with the hospices after their loved one died (and this is typical of hospice families). Thus, it is unlikely that the hospices were a major contributor to the social support reported by the participants in this study.

We also cannot know if the results of the study would have been different if less attrition from the study had occurred. Yet when we ran the analyses reported here using only participants who completed all five interviews, the results paralleled the results reported here, giving us more confidence in the reliability of the results.

## Conclusions

Previous research has consistently shown that having supportive others who will listen to one's deepest thoughts and feelings about a trauma such as a loss helps individuals to recover (Pennebaker, 1993; W. Stroebe, Stroebe, Abakoumkin, & Schut, 1996; Vachon & Stylianos, 1988). This study adds to that body of research by showing that personality variables such as rumination may predict who is most likely to seek out and benefit from the support of others and who may perceive difficulty getting the support they feel they need following a loss. Understanding how personality and social context interact appears to be critical to understanding why some people fare better than others following a loss.

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