

**REJECTION SENSITIVITY AND DAILY RUMINATION
TO INTERPERSONAL AND NONINTERPERSONAL STRESSORS**

by

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Honors Bachelor of Science in Psychology with Distinction

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TABLE OF CONTENTS

LIST OF TABLES	v
ABSTRACT	vi

Chapter

1	Introduction	1
	1.1 Rejection Sensitivity	3
	1.2 Daily Diary Methodology	5
2	Method	8
	2.1 Participants	8
	2.2 Procedure	8
	2.3 Initial Measures	9
	2.4 Daily Measures	10
3	Results	12
	3.1 Rumination to Interpersonal versus Noninterpersonal Daily Stressors	13
	3.2 Rumination as a Function of Rejection Sensitivity	13
4	Discussion	16
	4.1 Limitations	19
	4.2 Conclusion	21
5	References	22

Appendix

A	measures: initial survey	25
	A.1 Rejection Sensitivity Questionnaire	25
	A.2 Response Styles Questionnaire	31
	A.3 Demographic Information	32
B	Measures: Daily Diary Survey	35
	B.1 Negative Events Checklist	35
	B.2 Stress Reactive Rumination Scale	37
C	Human Subjects Approval	39

LIST OF TABLES

Table 1	Means and Standard Deviations of Study Variables.....	13
Table 2	Correlations between Initial Rejection Sensitivity and Trait Rumination and Aggregate Daily Variables	15

ABSTRACT

When stressful events occur, some individuals tend to ruminate, to think negatively and passively about the stressor or their own negative feelings (Smith & Alloy, 2009). In a college student population, interpersonal stressors are reported frequently and are among the most stressful (Ross, 1999). Therefore, we hypothesized that college students will ruminate more to daily interpersonal stressors than to daily noninterpersonal stressors. All individuals desire social acceptance, but some are more reactive to interpersonal rejection, a trait labeled rejection sensitivity (Downey & Feldman, 1996). We hypothesized that rejection sensitivity will be positively related to rumination to daily interpersonal (but not noninterpersonal) stressors. We measured rejection sensitivity using an initial online survey, and we measured rumination to daily stressors using an online 7-day diary survey that assessed the occurrence of daily stressors and rumination to the day's most stressful event. The results showed that students did not ruminate more to interpersonal compared to noninterpersonal stressors. The results also showed that rejection sensitivity was positively related to rumination to both interpersonal and noninterpersonal stressors. Although our hypotheses were not supported, the study suggests the value of a daily diary methodology for future research on rumination

Chapter 1

INTRODUCTION

Rumination is defined as passively and repetitively thinking about a negative mood, negative thoughts, or negative events (Smith & Alloy, 2009). Rumination has been studied extensively, and its deleterious effects on negative thinking, problem solving and instrumental behavior, social support, and depressive symptoms have been documented by numerous researchers (see Smith & Alloy, 2009, for a review).

One important distinction in the rumination literature is that between trait and state rumination. A trait is a characteristic that is relatively stable within an individual, while a state characteristic is one that is transitory and in flux, perhaps in response to certain events. Nolen Hoeksema (2008) defines rumination as a trait, and labels her particular model “depressive rumination.” Nolen-Hoeksema developed the Response Styles Questionnaire (RSQ) to measure the degree to which a person ruminates about his or her depressive mood (Nolen-Hoeksema & Morrow, 1991). The RSQ asks participants to report how they generally react when they feel “down, sad, or depressed.” The scale includes such items as, “Think about how sad you feel,” and “Think about how alone you feel.” Research supports depressive rumination as a stable individual difference variable (Young & Azam, 2003). There is a large literature on the predictive role of trait rumination in depression, with some evidence that it influences the onset of depression and somewhat less evidence that it influences the course of depression (Nolen-Hoeksema, 2008).

More recently, a few researchers have examined rumination at the state level, specifically stress-reactive rumination, which is defined as a maladaptive self-focus, specifically following stressful events (Robinson & Alloy 2003). With this in mind, Robinson and Alloy (2003) developed the Stress-Reactive Rumination Scale (SRRS; Alloy et al. 2000; Robinson, 1997). The SRRS includes such items as, “Think about how the stressful event was all your fault,” and “Think about how this always happens to you.” Robinson and Alloy (2003) concluded that “stress reactive rumination was a better and more consistent predictor of depressive episodes and their duration in combination with negative cognitive styles than was depressive rumination” (p. 287), as defined by Nolen-Hoeksema and her RSQ.

Seegerstrom, Stanton, Alden, and Shortridge (2003) showed that ruminative thought can be divided by content: rumination to interpersonal stressors versus rumination to achievement/noninterpersonal stressors. Interpersonal stressors include negative events that occur between the individual and a significant other, for example a fight with a family member, romantic partner, or friend (O’Neill, Cohen, & Tolpin, 2004). Noninterpersonal stressors include all negative events that do not deal with relationships with other people, such as hassles (e.g., running late) or academic stressors (e.g., receiving a poor test grade) (O’Neill et al., 2004). Ross, Neibling, and Heckert (1999) found that, for college students, daily interpersonal stressors occur more frequently than other kinds of daily stressors. O’Neill et al. (2004) used a daily diary methodology and found that affective reactivity to daily interpersonal stressors, but not to noninterpersonal stressors, was a prospective predictor of depressive symptoms in college students. Ross (1999) showed that college students find interpersonal events important. With this literature in mind, we predicted that in the

current study, college students would report more rumination to daily interpersonal stressors than to noninterpersonal stressors.

1.1 Rejection Sensitivity

The desire to be accepted by others and to avoid social rejection has been acknowledged as a central human motive (Horney, 1937; Maslow, 1987, McClelland, 1987; Rogers, 1959; Sullivan, 1937, as cited in Downey & Feldman, 1996). Social rejection results in diminished well-being and interpersonal functioning, including hostility, emotional withdrawal, and jealousy (Downey & Feldman, 1996). While there is a general tendency for all individuals to avoid social rejection, some individuals perceive and react to rejection more readily and strongly. Downey and Feldman (1994) labeled this strong reactivity to potential rejection as rejection sensitivity. Specifically, rejection sensitivity is defined as the disposition to anxiously expect, readily perceive, and overreact to rejection (Downey & Feldman, 1996). It is important to note that not only do high rejection sensitive individuals react in an extreme way when actually rejected, but they also tend to interpret ambiguous behavior of others as intentional rejection (Downey & Feldman, 1996). So even when there is no actual rejection from others, those who are rejection sensitive, who are anxiously expecting rejection from others, can interpret normal interpersonal interactions as acts of rejection.

Downey and Feldman (1996) developed the Rejection Sensitivity Questionnaire to assess the trait of rejection sensitivity. The Rejection Sensitivity Questionnaire asks participants to respond to hypothetical situations with (a) the degree of anxiety and concern they would have about the outcome, and (b) expectations of acceptance or rejection. Example scenarios include, "You ask your friend to do a big

favor,” and “You call your boyfriend/girlfriend after an argument and tell him/her you want to see him/her.”

Based on the work of Bowlby (1980), Downey and Feldman (1994) developed a model that proposes that parental rejection in one’s childhood can lead to high rejection sensitivity as an adult, with an individual anticipating anxiously that all significant others will meet her or his expressed needs with rejection. Like trait rumination, it too serves as a vulnerability factor for depression (Ayduk 2001).

The construct of rejection sensitivity is similar to Beck’s construct of sociotropy, which is defined as the tendency to have unrealistic expectations of interpersonal relations (Brookings, Zembara, & Hochstetlerb, 2003; Beck, 1983). Sociotropy is marked by heightened needs for reassurance and approval from others, overreliance on personal relationships as a source of self-worth, and vulnerability to stressors caused by relationship difficulties (Brookings et al., 2003). In fact, research has shown that rejection sensitivity and sociotropy are significantly related (REF). Similarly to trait rumination and rejection sensitivity, sociotropy is also a vulnerability factor for depression (Robins, Hayes, Block, Kramer, & Villena, 1995).

In a study conducted by Dasch, Cohen, Sahl, and Gunthert (2008), sociotropy was associated with negative affective and self esteem reactivity to number of daily interpersonal stressors. However, sociotropy was also associated with self-esteem reactivity to achievement stressors, but to a lesser degree. Because rejection sensitivity is related to sociotropy, and because both rumination and negative affective reactivity represent strong negative reactions to daily events, we predict that, in the current study, rejection sensitivity will be positively correlated with rumination to daily interpersonal stressors.

1.2 Daily Diary Methodology

To evaluate the conceptual and temporal link between rejection sensitivity, types of daily stressors, and stress-reactive rumination, we chose to use a daily diary methodology. This type of methodology involves repeated daily assessment of individuals over several days and sometimes weeks. Diary methods “capture the particulars of experience in a way not possible using traditional designs” (p. 579) and generates summary accounts while avoiding the biases of longer-term retrospection (Bolger, Davis, & Raaeli, 2003). Shiffman, Stone, and Hufford (2008) discuss the particular threats to validity that result from retrospection in one-shot or cross-sectional measures. Not only is an individual’s recall subject to error due to memory reconstruction and the availability heuristic, it is also subject to bias by the person’s context and mental state at the time of recall. This type of problem is called state-congruent recall, and it can lead to biased reports (Bower, 1981).

Shiffman et al. (2008) argue that more data collection points, via Ecological Momentary Assessment, or EMA, lead to more accurate data. Particularly, daily diary studies are popular because of their ease of administration and low subject burden. Daily diary surveys can be easily administered online, take only a few minutes to complete, and participants generally have an option within a certain block of time of when to complete the survey (Shiffman et al, 2008).

Several researchers have used a daily diary methodology to study college students’ affective reactions to different types of daily negative events (e.g., Dasch et al., 2008; O’Neill et al., 2004). Reactions to daily stress are potentially important because research has shown that small negative events (hassles) influence subsequent maladjustment and specific disorders, such as depression (Peeters, Nicolson, Berkhof, Delespaul, & deVries (2003).

However, Moberly and Watkins (2008) noted that very few studies have examined rumination using a daily diary design. Nolen-Hoeksema, Morrow, and Fredrickson (1993) utilized a daily diary measure in which students recorded responses to depressed mood with a checklist. Ruminative responding was correlated with depressed mood and RSQ score. Another relevant study was conducted by Young and Azam (2003), who adapted the RSQ for daily use and demonstrated the predictive role of rumination in symptom severity of seasonal affective disorder during the winter months. Young and Azam (2003) cited the benefit to assessing ruminative response style with a daily measure and collecting reports of actual ruminative behavior, not simply assessing general ruminative tendencies. However, they did conclude that the RSQ is more appropriate as a trait measure than as a daily measure. To our knowledge, no study to date has examined stress reactive rumination, as measured by the SRRS, at the daily level.

Moreover, very few diary studies have capitalized on major events and developmental transitions, in an attempt to understand the psychological changes that characterize them (Bolger et al., 2003). An example of such an event/transition is beginning college. Because of the major life change of adjusting to college life (Towbes & Cohen, 1996), college students, especially freshmen, are a population prone to stress (D'Zurilla & Sheedy, 1991), making them an appropriate group for studying the effects of stressful events. Freshmen must transition to being away from home, adjust to high academic demands, and forge new friendships and relationships (Ross, 1999). The entire student population in general has to deal with the stressors of choosing a career or possibly a life partner.

College students also report the frequent occurrence of interpersonal stressors, and regard them as more meaningful than other types of stressors (Ross, 1999). Thus, for this population, especially for freshmen, the trait of rejection sensitivity might influence their ruminative reactions to daily interpersonal stressors.

Therefore, in the current project, we conducted a daily diary study of primarily first semester college freshmen. Participants also completed the Rejection Sensitivity Questionnaire (Downey & Feldman, 1996). We predicted that the students would report more daily rumination to daily interpersonal stressors compared to noninterpersonal stressors. We also hypothesized that the trait of rejection sensitivity will be positively correlated with rumination to daily interpersonal stressors.

Chapter 2

METHOD

2.1 Participants

The initial sample included 88 students enrolled in PSYC 100-014 during the Fall 2009 semester. Six students were removed from the sample because they did not complete at least four of the seven daily diaries, a requirement for study inclusion. Thus, the final sample had 82 students. Students were offered extra credit to participate in this study or to complete a short reading and writing assignment of comparable time commitment.

The final sample included 72 women (87.8%) and 10 men (12.2%). Ninety-eight percent of the sample was 18 or 19 years old, and 99% were first semester freshmen. The participants were 80.5% Caucasian (n=66), 8.5% African American (n=7), 6.1% Asian (n=5), and 4.9% Hispanic (n=4).

2.2 Procedure

Students first completed an initial battery of questionnaires online. The battery included the Rejection Sensitivity Questionnaire (Downey & Feldman, 1996), which assesses readiness to perceive and react to social rejection. It also included the Response Styles Questionnaire (Nolen-Hoeksema, 1991), which evaluates the tendency to ruminate. Following these initial questionnaires, students completed brief Internet-based surveys between 8 p.m. and 2 a.m. each night for seven consecutive nights. The survey was designed using the Qualtrics system and took approximately seven minutes

to complete each night. The nightly survey asked about the daily occurrence of specific stressors. Students indicated which stressor was the worst (“the most stressful”) that day, and then completed rumination items to report how much they ruminated in response to that specific event.

2.3 Initial Measures

The Rejection Sensitivity Questionnaire (Downey & Feldman, 1996) is an 18-item measure that presents scenarios in which rejection is possible. For each situation, the participant is then asked to rate (a) the degree of anxiety and concern about the outcome, and (b) expectations of acceptance or rejection. One example situation is, “You ask someone in one of your classes to coffee.” Each item is rated using a 6- point Likert-type scale. For part A of the question, the participant was asked to rate how concerned or anxious she or he would be about the situation, from very unconcerned to very concerned; for example, “How concerned or anxious would you be over whether or not the person would want to go?” In part B of the question, the participant rated how much she or he expected to be accepted, for example, “I would expect that the person would want to go with me,” using response options that ranged from very unlikely to very likely. Previous research has documented the measure’s good test-retest and internal reliability (Downey & Feldman, 1996). In the current sample, the Rejection Sensitivity Questionnaire had an internal reliability (Cronbach’s alpha) of .86.

The Response Styles Questionnaire (RSQ; Nolen-Hoeksema & Morrow, 1991) is a 22-item scale that assesses an individual’s focus on self, symptoms, and the causes and consequences of her or his mood, by asking the person to indicate what she or he “generally does when feeling down, sad, or depressed.” Each item is rated on a 4-point scale, ranging from almost never to almost always. The scale includes such items

as, “Think about how sad you feel,” “Think about how alone you feel,” and “Think ‘why do I always react this way?’ ” Nolen-Hoeksema and Morrow (1991) have documented the measure’s good test-retest and internal reliability. In the current sample, the Response Styles Questionnaire had an internal reliability (Cronbach’s alpha) of .95.

2.4 Daily Measures

The nightly survey included a checklist of daily stressors, adapted from Dasch et al. (2008). There were 19 items on the negative events checklist, including 8 interpersonal stressors and 11 noninterpersonal stressors (as determined by Dasch et al.). Interpersonal stressors included “Had an argument or got along poorly with a friend, family member, or romantic partner,” and “Tried to share something important and a friend, family member, or romantic partner acted disinterested.” Noninterpersonal stressors included academic stressors and other common daily stressors, like “Received a low test grade today,” and “Hassle (e.g. parking problem, delays.)” Participants checked which daily stressors occurred to them that day, and then indicated which of these stressors was the worst (“most stressful”) of the day.

The nightly survey included a number of appraisal items concerning the worst event of the day, including its undesirability. Participants used a 5-point scale to rate their worst event’s undesirability, with 1=slightly undesirable and 5=extremely undesirable.

Participants then completed items from the 9-item Stress-Reactive Rumination Scale (SRRS; Alloy et al., 2000; Robinson, 1997) to indicate how much they ruminated to their worst event of the day. The SRSS was adapted from the Response Styles Questionnaire, which assesses depressive rumination, to focus on rumination about a specific event, or stress-reactive rumination. Participants rated each item using

a scale from 0 to 100, with 0 indicating did not focus on this at all, 50 indicating focused on this somewhat, and 100 indicating focused on this to a great extent. Items included “Thought about how the stressful event is all your fault,” “Think about what the occurrence of the stressor means to you,” and “Think about how things like this always happen to you.” Alloy and Robinson (2003) demonstrated that the SRRS has good temporal reliability and convergent and discriminant validity.

Chapter 3

RESULTS

The means and standard deviations obtained on the current measures were consistent with those reported in previous relevant studies of college students (see Table 1). Specifically, in the current study, the mean score on the Rejection Sensitivity Questionnaire was 9.66, compared to a mean of 8.79 reported by Downey and Feldman (1996) in their study of 585 undergraduates. Our participants had a mean score of 44.22 on the RSQ, compared to a mean of 43.51 reported by Greenberg, Shepard, Chuick, and Cochran (2009) in their study of undergraduate men. There are no previous daily studies that used the SRRS, and so we cannot compare our scores to those reported in the literature. We found that interpersonal stressors were nominated as the day's most stressful an average of 2.20 days per week, and that noninterpersonal stressors were nominated an average of 4.27 days per week. (Some participants, on some days, did not nominate a worst stressor, which is why these means do not total to 7.00 days.) This worst daily event ratio (interpersonal/noninterpersonal) is highly similar to that reported by O'Neill et al. (2004) in their study of undergraduates.

The 82 participants nominated a worst (most stressful) daily event on 530 occasions over the 7-days of the diary study. The three most common worst events of the day were: (a) hassle (e.g., parking problem, delays) (14.3%); (b) had an argument or got along poorly with a friend, family member, or romantic partner (14.0%); and (c) experienced a personal illness, injury, or accident (9.8%).

Table 1 Means and Standard Deviations of Study Variables

Variables	Mean	Standard Deviation
Trait Rumination (Response Styles Questionnaire)	44.22	14.36
Rejection Sensitivity (Rejection Sensitivity Questionnaire)	8.79	3.46
Daily Rumination (Stress Reactive Rumination Scale)	23.5	15.73
Number of days worst event was Interpersonal	2.20	1.54
Number of days worst event was Noninterpersonal	4.27	1.52

3.1 Rumination to Interpersonal versus Noninterpersonal Daily Stressors

To test our hypothesis that students would ruminate to interpersonal stressors more than to noninterpersonal stressors, we conducted a paired t-test in SPSS. Although there was somewhat more rumination to interpersonal events ($M = 26.97$) versus noninterpersonal events ($M = 23.14$), this was not a significant difference, $t(80) = 1.634$, $p = .107$. Therefore, this hypothesis was not supported. As a follow up to this finding, we also conducted a paired t-test to compare students' undesirability ratings of their worst daily event when it was interpersonal versus noninterpersonal. This comparison was not significant, which is consistent with the nonsignificant comparison involving daily rumination.

3.2 Rumination as a Function of Rejection Sensitivity

To test the relationship between rejection sensitivity and rumination to interpersonal versus noninterpersonal stressors, we used bivariate correlations in SPSS,

as shown in Table 2. We found that initial rejection sensitivity was significantly positively correlated with rumination to both interpersonal and noninterpersonal events. We then tested the significance of the difference between these dependent correlations, but their difference was not significant.

When controlling for initial trait rumination (RSQ), rejection sensitivity was still significantly positively correlated with rumination to both interpersonal ($r = .31, p < .01$) and noninterpersonal ($r = .24, p < .01$) stressors.

As a follow up to the equally positive relations between rejection sensitivity and rumination to both interpersonal and noninterpersonal daily stressors, we examined the correlation between rejection sensitivity and students' undesirability ratings of their worst event when it was interpersonal and when it was noninterpersonal. These correlations were both nonsignificant. We also examined the correlation between rejection sensitivity and the number of days (out of 7) the students identified an interpersonal stressor as the worst of the day. This correlation was also nonsignificant (see Table 2).

For exploratory purposes, we also computed correlations between initial trait rumination and daily rumination to daily stressors (see Table 2). Initial trait rumination, as measured by the Response Style's Questionnaire, was significantly positively correlated with rumination to both noninterpersonal ($r = .53, p < .01$) and interpersonal stressors ($r = .25, p < .05$). We then tested the significance of the difference between these dependent correlations, and found that the first correlation was significantly larger than the second ($p = .003$).

Table 2 Correlations between Initial Rejection Sensitivity and Trait Rumination and Aggregate Daily Variables

	Rejection Sensitivity	Trait Rumination Total
Trait Rumination	.388**	--
Average # daily interpersonal stressors as day's worst	.076	.196
Average stress-reactive rumination (SRRS) to daily Interpersonal events	.373**	.250*
Average stress-reactive rumination (SRRS) to daily Noninterpersonal events	.319**	.533**

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

Chapter 4

DISCUSSION

ADD: 1. Gender diff- all females 2. How categorize

The trait of rejection sensitivity might cause one to appraise undesirable interpersonal events as more intentional and upsetting (Downey & Feldman, 1996). Because these interpersonal events are more salient to rejection sensitive individuals, they may negatively focus, or ruminate, on these types of events more often. This study examined how the trait of rejection sensitivity is related to rumination to daily interpersonal and noninterpersonal negative events. Because college students experience many stressors, and are particularly vulnerable to interpersonal stressors, we focused on a college student sample (Ross, 1999).

Because college students regard interpersonal events as especially important and report them more frequently (Ross, 1999), we expected that they would ruminate more to interpersonal than to noninterpersonal events. While there was more mean rumination to the former type of stressor, this difference was not significant. This might be because our sample consisted of virtually all first semester freshmen for whom academic issues, which were coded as noninterpersonal, are especially important. Perhaps interpersonal events are more important than non-interpersonal events to college students overall, but first semester freshmen are more affected by academic (noninterpersonal) stressors than older college students are. For example, they might still be adjusting to the demands of college-level academics, while older students have already been able to balance their academic work. Or, first semester freshmen may be

less established in social networks and have less opportunities for interpersonal stressors, whereas older students may have developed more close friendships and romantic relationships. Research has shown that first semester freshmen report experiencing specific types of chronic stressors more than upper classmen, including academic stressors (Towbes & Cohen, 1996). Thus, the fact that our sample was comprised of first semester freshmen might explain why both types of daily stressors (interpersonal and noninterpersonal) produced statistically equivalent daily rumination. In future studies, it would be useful to divide the noninterpersonal stressor category into academic and nonacademic stressors. With this in mind, it is interesting to note that models of distress and well being in college students group stressors into interpersonal and academic categories (Maybury, 2003).

We also expected that the trait of rejection sensitivity would correlate with rumination to daily interpersonal stressors, but not to daily noninterpersonal stressors. Interestingly, we found that rejection sensitivity was positively related to rumination to both types of daily stressors. This might be because rejection sensitivity is significantly positively related to the traits of trait rumination (see Table 2) and neuroticism (not reported in the results). It is also possible that some of the daily stressors that we coded as noninterpersonal (per Dasch et al., 2008) were viewed as interpersonal ones by rejection sensitive individuals. Although the distinction between interpersonal and non-interpersonal events seems straightforward, it may be that rejection sensitive individuals consider even seemingly non-interpersonal events as interpersonal in nature. For example, if a student reported that her or his worst event was failing an exam, that event would be considered non-interpersonal. It is plausible, though, that a rejection sensitive individual would interpret this event as an interpersonal one,

meaning that now the professor wouldn't like her or him, or now her or his parents will be disappointed or angry with the student. Perhaps it would be useful to include a measure in future research which asks participants to rate how interpersonal they found their reported worst event of the day, to assess the degree to which an individual considers an event interpersonal. For example, an item after the worst event of the day report might be, "To what extent do you feel this event is interpersonal, that is, impacts your relationship with your family, friends, or romantic partner,?" and be rated on a Likert scale. This would determine the extent to which a stressor is interpersonal or noninterpersonal as viewed by the individual who experienced it.

Rejection sensitivity's relationship to rumination to both interpersonal and noninterpersonal stressors is similar to the finding by Dasch et al. (2008), that the trait of sociotropy (over-investment in interpersonal relations) predicted students' strong affective reactions to number of both daily interpersonal and noninterpersonal stressors. Although the trait of sociotropy was originally proposed as a depression vulnerability factor in the context of interpersonal stressors in particular, research suggests that sociotropy functions as a nonspecific vulnerability factor, influencing reactions to all types of stressors (Brookings, Zembara, & Hochstetlerb, 2003; Dasch et al., 2008). Perhaps rejection sensitivity functions in the same way.

The most frequently reported worst events of the day from the negative events checklist were: (a) hassle (e.g., parking problem, delays; 14.3%), (b) had an argument or got along poorly with a friend, family member, or romantic partner (14.0%), and (c) experienced a personal illness, injury, or accident (9.8%). Perhaps the "Hassle" stressor was reported most frequently because it represents a wider range of stressors than the other items (Maybury, 2003). Also, hassles could be reported as the

worst event of the day simply because they occur most often. In the absence of a particularly stressing event in a person's day, they may simply endorse "Hassle" as their worst event. Ross (1999) reported that the top five sources of stress in his study of college students were change in sleeping habits, vacations, increased work load, and new responsibilities. It would be useful to compare the same population's responses to various daily negative event checklists, as these tend to differ from study to study. In our study, the second most frequently reported stressor, an interpersonal stressor, was reported only slightly less than the first most frequently reported noninterpersonal stressor. Future study is required to determine whether college students' worst event of the day tends to be interpersonal or noninterpersonal, and whether this pattern varies as a function of year in college, gender, etc.

We also found that initial trait rumination, as measured by the Response Styles Questionnaire (Nolen-Hoeksema & Morrow, 1991), was correlated more strongly with rumination to noninterpersonal stressors than interpersonal stressors, and that this difference was significant. Since college students report interpersonal stressors frequently and as most salient (Ross, 1999), we interpret this pattern to suggest that all college students tend to ruminate to interpersonal stressors, but trait ruminators in particular also tend to ruminate to noninterpersonal stressors as well.

4.1 Limitations

One limitation of the current study is that the participants were all recruited from the same introductory psychology course and might have had unique experiences associated with this class taught by this professor. The participants were also from the same university, were mostly female (87.8%), virtually all first semester freshmen, and

were not ethnically representative of the general population (80.5% Caucasian), and therefore these findings cannot be generalized.

Our population was 87.8% female, and this unequal gender distribution may have impacted our findings. Specifically, research has shown that while there are no significant gender differences in rejection sensitivity (Downey & Feldman, 1996), females ruminate more than males (Nolen-Hoeksema, 2001). It is possible that our nonsignificant findings reflect in part the limited variability in our female students' rumination scores. In the future, it would be important to conduct this type of study with a more equal distribution of men and women.

In addition, all of the measures were self-report, and therefore could have been influenced by recall bias at the time of data collection. Even though the daily diary methodology minimized this bias (Shiffman, Stone, & Hufford, 2008), participants were still reflecting on the day's earlier events and their earlier rumination; thus, their reports of these variables might have been influenced by their mood at the time of diary completion. In addition, the initial survey utilized a traditional (retrospective cross-sectional) design, and relied on reports of what students usually act or think to measure rejection sensitivity and trait rumination. The entire study relied on self reports, which are not always reliable and are also sometimes influenced by social desirability pressures (Hunt et al., 2003). It would be more telling to measure rejection sensitivity and rumination in a number of ways, including observation and peer reports, for example.

Also, multilevel statistical models are more appropriate for daily diary studies than the analyses used in the current study (Bolger et al., 2003; Shiffman et al., 2008). However, those kinds of analyses are beyond the expertise of the author. A more

sensitive analysis of the data reported here would require evaluation of the within-subject relationships (e.g., between type of daily event and rumination) and how those relationships varied as a function of between subject variables (e.g., rejection sensitivity).

Roelefs et al. (2008) made an important observation that the constructs of worry and rumination are almost empirically synonymous, except for worry focusing on the future and rumination focusing on the past. Rejection sensitivity is defined as the tendency to anxiously expect rejection in the future, while rumination focuses on events and feelings in the present and past. It would therefore be interesting to study both worry and rumination as they relate to rejection sensitivity. Perhaps worry is more strongly related to rejection sensitivity, due to their mutual focus on the future.

4.2 Conclusion

Overall, this study was novel in its examination of daily rumination in response to different types of daily stressors, and whether that rumination was influenced by the trait of rejection sensitivity. As mentioned previously, very few studies have examined daily event-related rumination. Inconsistent with our first hypothesis, we did not find that college students ruminated more in response to daily interpersonal compared to noninterpersonal stressors. Inconsistent with our second hypothesis, we found that the trait of rejection sensitivity was equally related to rumination to both types of daily events. Future research is needed to better understand the role of rejection sensitivity in college students' reactions to daily life experiences.

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Appendix A

MEASURES: INITIAL SURVEY

A.1 Rejection Sensitivity Questionnaire

Each of the items below describes things college students sometimes ask of other people. Please imagine that you are in each situation. You will be asked to answer the following questions:

1) How concerned or anxious would you be about how the other person would respond?

2) How do you think the other person would be likely to respond?

1. You ask someone in class if you can borrow his/her notes.

How concerned or anxious would you be over whether or not the person would want to lend you his/her notes?

very unconcerned-very concerned (1-6)

I would expect that the person would willingly give me his/her notes.

very unlikely-very likely (1-6)

2. You ask your boyfriend/girlfriend to move in with you.

How concerned or anxious would you be over whether or not the person would want to move in with you?

very unconcerned-very concerned (1-6)

I would expect that he/she would want to move in with me.

very unlikely very likely (1-6)

3. You ask your parents for help in deciding what programs to apply to.

How concerned or anxious would you be over whether or not your parents would want to help you?

very unconcerned -very concerned (1-6)

I would expect that they would want to help me.

very unlikely very likely (1-6)

4. You ask someone you don't know well out on a date.

How concerned or anxious would you be over whether or not the person would want to go out with you?

very unconcerned very concerned (1-6)

I would expect that the person would want to go out with me.

very unlikely very likely (1-6)

5. Your boyfriend/girlfriend has plans to go out with friends tonight, but you really want to spend the evening with him/her, and you tell him/her so.

How concerned or anxious would you be over whether or not your boyfriend/girlfriend would decide to stay in?

very unconcerned very concerned (1-6)

I would expect that the person would willingly choose to stay in.

very unlikely very likely (1-6)

6. You ask your parents for extra money to cover living expenses.

How concerned or anxious would you be over whether
or not your parents would help you out?

very unconcerned very concerned (1-6)

I would expect that my parents would not mind helping me out.

very unlikely very likely (1-6)

7. After class, you tell your professor that you have been having some trouble with
a section of the course and ask if he/she can give you some extra help.

How concerned or anxious would you be over whether or not your professor
would want to help you out?

very unconcerned very concerned (1-6)

I would expect that my professor would want to help me out

very unlikely very likely (1-6)

8. You approach a close friend to talk after doing or saying something that
seriously upset him/her.

How concerned or anxious would you be over whether or not your friend would
want to talk with you?

very unconcerned very concerned (1-6)

I would expect that he/she would want to talk with me to try to work things out.

very unlikely very likely (1-6)

9. You ask someone in one of your classes to coffee.

How concerned or anxious would you be over whether or not the person would want to go?

very unconcerned very concerned (1-6)

I would expect that the person would want to go with me.

very unlikely very likely (1-6)

10. After graduation, you can't find a job and ask your parents if you can live at home for a while.

How concerned or anxious would you be over whether or not your parents would want you to come home?

very unconcerned very concerned (1-6)

I would expect I would be welcome at home.

very unlikely to very likely (1-6)

11. You ask your friend to go on a vacation with you over Spring Break.

How concerned or anxious would you be over whether or not your friend would want to go with you?

very unconcerned very concerned (1-6)

I would expect that he/she would want to go with me.

very unlikely very likely (1-6)

12. You call your boyfriend/girlfriend after a bitter argument and tell him/her you want to see him/her.

How concerned or anxious would you be over whether or not your
boyfriend/girlfriend would want to see you?

very unconcerned very concerned (1-6)

I would expect that he/she would want to see me.

very unlikely very likely (1-6)

13. You ask a friend if you can borrow something of his/hers.

How concerned or anxious would you be over whether
or not your friend would want to loan it to you?

very unconcerned very concerned (1-6)

I would expect that he/she would willingly loan me it. V

ery unlikely very likely (1-6)

14. You ask your parents to come to an occasion important to you.

How concerned or anxious would you be over whether or not your parents would
want to come?

very unconcerned very concerned 1-6)

I would expect that my parents would want to come.

very unlikely very likely (1-6)

15. You ask a friend to do you a big favor.

How concerned or anxious would you be over whether or not your friend would do
this favor?

very unconcerned very concerned (1-6)

I would expect that he/she would willingly do this favor for me.

very unlikely very likely (1-6)

16. You ask your boyfriend/girlfriend if he/she really loves you.

How concerned or anxious would you be over whether or not your
boyfriend/girlfriend would say yes?

very unconcerned very concerned

I would expect that he/she would answer yes sincerely.

very unlikely very likely (1-6)

17. You go to a party and notice someone on the other side of the room and then
you ask

them to dance.

How concerned or anxious would you be over whether or not the person would
want to dance with you?

very unconcerned very concerned (1-6)

I would expect that he/she would want to dance with me.

very unlikely very likely (1-6)

18. You ask your boyfriend/girlfriend to come home to meet your parents.

How concerned or anxious would you be over whether or not your
boyfriend/girlfriend would want to meet your parents?

very unconcerned very concerned (1-6)

I would expect that he/she would want to meet my parents.

very unlikely very likely (1-6)

A.2 Response Styles Questionnaire

People think and do many different things when they feel depressed. Please read each of the items below and indicate whether you almost never, sometimes, often, or almost 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.

1= Almost never

2= Sometimes

3= Often

4= Almost always

1. think about how alone you feel
2. think "I won't be able to do my job if I don't snap out of this"
3. think about your feelings of fatigue and achiness
4. think about how hard it is to concentrate
5. think "What am I doing to deserve this?"
6. think about how passive and unmotivated you feel.
7. analyze recent events to try to understand why you are depressed
8. think about how you don't seem to feel anything anymore
9. think "Why can't I get going?"

10. think "Why do I always react this way?"
11. go away by yourself and think about why you feel this way
12. write down what you are thinking about and analyze it
13. think about a recent situation, wishing it had gone better
14. think "I won't be able to concentrate if I keep feeling this way."
15. think "Why do I have problems other people don't have?"
16. think "Why can't I handle things better?"
17. think about how sad you feel.
18. think about all your shortcomings, failings, faults, mistakes
19. think about how you don't feel up to doing anything
20. analyze your personality to try to understand why you are depressed
21. go someplace alone to think about your feelings
22. think about how angry you are with yourself

A.3 Demographic Information

1. Age
 - a. 17 or younger
 - b. 18
 - c. 19
 - d. 20
 - e. 21
 - f. 22
 - g. 23-25

- h. 26 or older
- 2. What year are you
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Other
- 3. Sex
 - a. Male
 - b. Female
- 4. Ethnic Background
 - a. Hispanic/Latino
 - b. Non-Hispanic/Latino
- 5. Racial Background
 - a. American Indian or Alaskan Native
 - b. Asian
 - c. Black or African American
 - d. Native Hawaiian
 - e. White
 - f. More than one race
 - g. Other
- 6. If you were to drive back to your family home from the University of Delaware, how long would it take you?
 - a. Less than an hour

- b. 1-2 hours
 - c. 2-3 hours
 - d. More than 3 hours
7. Have you received any mental health services in the past?
- a. Yes
 - b. No
8. If so, was it for:
- a. Depression
 - b. Family problems
 - c. Other problems

Appendix B:
MEASURES: DAILY DIARY SURVEY

B.1 Negative Events Checklist

Please look over all of the events below. If any of these occurred to you TODAY, place a check mark next to it by clicking on the bubble. Please select only one for each event that occurred today.

1. Had an argument or got along poorly with a friend, family member, or romantic partner.
2. A friend, family member, or romantic partner let me down (didn't call, meet, or do as promised)
3. A friend, family member, or romantic partner was displeased with me
4. Tried to share something important and a friend, family member, or romantic partner acted disinterested
5. A friend, family member, or romantic partner embarrassed me or hurt my feelings in front of others
6. Asked a friend, family member, or romantic partner to spend time together, and he or she said no
7. Asked a friend, family member, or romantic partner for help, and he or she said no

8. Argument/conflict with someone OTHER THAN a friend, family member, or romantic partner
9. Took an exam today and think I did poorly
10. Received a low test grade today
11. Worked on a paper or homework assignment today and think I did poorly
12. Received a low paper or homework grade today
13. Was incompetent during a class discussion or responding to a professor's question
14. Experienced a personal illness, injury, or accident
15. Experienced a job-related stressor
16. Experienced a financial problem
17. Experienced a problem related to extracurricular activity (e.g., sports team, club)
18. Hassle (e.g., parking problem, delays)
19. Something bad happened to a friend, family member, or romantic partner (didn't happen to me)

What was the worst, most negative event that occurred today?

Type the corresponding number from the list above (#14-32) _____

If it is NOT one of the above items, briefly describe it here

The following questions deal with the worst event of the day that you just indicated.

1. How undesirable was this event?

1=Slightly undesirable

5=Extremely undesirable

B.2 Stress Reactive Rumination Scale

1. Ask someone to help you overcome your problem.____
2. Try to find something positive in the situation or something you've learned.
3. Think about how the stressful event is all your fault._
4. Think about how the negative event will negatively affect your future.
5. Think about what the occurrence of the event means about you._
6. Think about how things could have gone differently.____
7. Think about the possibility that things will never get better.____
8. Think about how terrible the stressful event is._
9. Think about the stressful event and wish it had gone better.____
10. Think about how bleak your future looks._
11. Think that the cause of the event will lead to additional stressful events in your life.
12. Help someone else with something, to distract yourself._
13. Think about the causes of the stressor._
14. Do something to take your mind off your problem(s)._
15. Go to a favorite place to get your mind off of the stressor._
16. Ruminates about how the stressor will affect other areas of your life.
17. Concentrate on your work._
18. Think about how important the stressful event is to you.____

19. Think “No matter what I do my life will never get better.” ____
20. Make a plan to overcome the problem. ____
21. Think about how futile life is. _
22. Think about how bad your life is in general. ____
23. Think about how things like this always happen to you. _
24. Think about how hopeless your situation is. _
25. Think that the event means that you will be unable to cope with events in the future.

Appendix C
HUMAN SUBJECTS APPROVAL

QuarkTite™ and
TIF (Uncompressed) document
are needed to view this journal.