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The Benefits and Risks of Telling and Listening to Stories of Difficulty Over Time: Experimentally Testing the Expressive Writing Paradigm in the Context of Interpersonal Communication Between Friends

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Abstract

The overarching goal of the current study was to determine the impact of talking interpersonally over time on emerging adults' individual and relational health. Using an expressive writing study design (see Frattaroli, 2006), we assessed the degree to which psychological health improved over time for college students who told and listened to stories about friends' current difficulties in comparison with tellers in control conditions. We also investigated the effects on tellers' and listeners' perceptions of each other's communication competence, communicated perspective taking, and the degree to which each threatened the other's face during the interaction over time to better understand the interpersonal communication complexities associated with talking about difficulty over time. After completing prestudy questionnaires, 49 friend pairs engaged in three interpersonal interactions over the course of 1 week wherein one talked about and one listened to a story of difficulty (treatment) or daily events (control). All participants completed a poststudy questionnaire 3 weeks later. Tellers' negative affect decreased over time for participants exposed to the treatment group, although life satisfaction increased and positive affect decreased across time for participants regardless of condition. Perceptions of friends' communication abilities decreased significantly over time for tellers. The current study contributes to the literature on expressive writing and social support by shedding light on the interpersonal implications of talking about difficulty, the often overlooked effects of disclosure on listeners, and the health effects of talking about problems on college students' health.

Emerging adulthood can be a stressful time, as individuals navigate educational, social, and relational changes and challenges, such as maintaining good grades in college, adjusting to the freedom of living on one's own, and managing pressures to engage in risky behaviors such as alcohol use and sexual activity. Among college students, for example, increases in stressful life events have predicted a variety of detrimental psychological outcomes, including anxiety and depression (Segrin, 1999), as well as suicidal ideation and hopelessness (Dixon, Rumford, Heppner, &Lips, 1992). Physical ailments, such as lack of energy, loss of appetite, headaches, and gastrointestinal issues, are also common among emerging adults in college (Winkelman, 1994). Despite the well-documented outcomes of

stress during this developmental period, there is a lack of rigorous research dedicated to evaluating stress-reducing programs (Deckro et al., 2002).

Research over the last several decades with both college students and others, however, has established the health benefits of the expressive disclosure of difficult experiences over time (e.g., Frattaroli, 2006). Research grounded in the expressive writing paradigm (EWP) typically includes writing about a stressful or traumatic experience over the course of several days. Analyses have documented the mental (e.g., Murray & Segal, 1994) and physical (e.g., Pennebaker, Kiecolt-Glaser, & Glaser, 1988) health benefits of writing over time, as well as the specific elements of writing (e.g., emotion words, insight words; Pennebaker, Mayne, & Francis, 1999) that distinguish participants along psychological and physical well-being outcomes. These positive benefits of writing are theoretically grounded in concepts such as disinhibition, as well as cognitive and social processing (for reviews see Frattaroli, 2006; Niederhoffer & Pennebaker, 2009), suggesting that writing about stress and trauma enables sense-making, catharsis, control over difficult events, and connection with others in ways that positively impact health.

Despite these findings, relatively little research has investigated the benefits of disclosure beyond writing or talking into a tape recorder (cf. Pasupathi, 2001). Yet individuals experiencing stress may be more likely to talk about their problems with friends than they are to keep a journal and may discuss their problems more than once. Indeed, 95% of people share their emotional experiences with others shortly after they occur (Rimé, 1995). Therefore, in the present study our overarching goal is to determine the impact of talking interpersonally over time on emerging adults' individual and relational well-being.

We do this by addressing four gaps in the extant research. First, the EWP focuses on the health effects of people writing or talking about difficulty alone. In the current study, we redress this gap by examining the benefits and risks associated with how interpersonally communicating about stress affects individuals' psychological health and their perceptions about the friend with whom they discuss difficulty. Research on social support suggests that there are both benefits and risks to self-disclosing (Goldsmith, 2004), making it unclear whether interpersonal disclosure is associated with the same benefits as expressive writing. Therefore, we investigate whether telling a friend the story of difficulty has benefits for tellers similar to those uncovered in previous writing studies.

Second, we know little about how expressing and making sense of difficulty work when considered in multiple conversations over time. We are only beginning to understand the implications of those conversations on individual health through retrospective reports of behaviors with social network members (e.g., Calmes & Roberts, 2008; Rose, 2002). Research on co-rumination, or excessively discussing stressors with a relational partner, has been linked to depression and anxiety (Rose, 2002), but studies have not observed how talking about problems with friends over time contributes to individuals' health. This gap in the literature is important to fill in order to understand not only the effects of depressive types of disclosure (e.g., co-rumination), but also how interpersonally communicating about difficulty over time affects support seekers' health.

Third, little is known about how the effects of discussing difficulty extend beyond the writer/teller. Thus, we also examine the possible effects of listening to a friend's story of stress. Hearing about a friend's troubles may have benefits for the conversational partner, as research shows that empathic responses can result in positive perceptions of the listener's competence (Jones, 2004), as well as increases in relational satisfaction over time (Busby & Gardner, 2008). However, listening to stories of difficulty, particularly over time, could be mildly upsetting to friends if the storytelling results in emotional contagion, burn-

out, excessive co-rumination (Rose, 2002), or the listener feeling ineffectual, frustrated, or imposed upon (Goldsmith, 2004).

Fourth, and finally, research has yet to examine how discussing difficulty may impact the friendship in which it is discussed. The current study, therefore, examines the potential impact of telling or listening to a story of difficulty over time on emerging adult friends' perceptions of each other's interpersonal communication. Expressive writing studies typically analyze mental and physical health outcomes, including negative affect, doctor's visits, and depression (for a review see Frattaroli, 2006). When people talk to their friends about their troubles, however, a number of additional implications for the health of the friendship may arise, such as threats to the listener's negative face (Goldsmith, 1994), perceptions of the support seeker and provider's competence (Albrecht, Burleson, & Goldsmith, 1994), and perceptions about the other's interpersonal communication skills, such as communicated perspective-taking (e.g., Koenig Kellas, Willer, & Trees, 2013). Because impression management and face work are central to the provision of social support and communal coping (e.g., Goldsmith, 1994) and because interpersonally communicating about difficulty has implications for relational as well as individual well-being, we also examined the ways in which interpersonally communicating about difficulty over time predicts changes in perceptions about a conversational partner's communication behavior. In order to understand these effects, in what follows, we review the literature on expressive disclosure as well as the benefits and risks of social support. We then present the findings from a treatment–control group study design testing the interpersonal and health effects of telling and listening to difficult stories over time.

The Benefits Of Expressive Disclosure

For over two decades, research from the expressive writing paradigm has focused on the benefits of giving language to stressful and traumatic life events (see Frattaroli, 2006; Niederhoffer & Pennebaker, 2009). The EWP approach is grounded in the notion that disclosing and processing difficult experiences predicts positive health benefits. Beginning with Pennebaker and Beall's (1986) initial investigation, expressive writing studies compare a treatment group of participants who write about a stressful event or trauma to a control group of people who write about more innocuous topics, both for about 15 minutes each day over 3 to 5 days. Treatment groups are encouraged to "let go" and "really explore [their] very deepest emotions and thoughts," and "to link [their] experiences to [their] past, present, or future, or to who [they] have been, would like to become, or are now" (e.g., Pennebaker & Seagal, 1999, p. 1244). Control groups have written about plans for the day, the laboratory room where they were seated, or objects.

Results of these studies overwhelmingly support the notion that discussing stressful experiences is related to increases in health, including improved mental and physical health (Lyubomirsky, Sousa, & Dickerhoof, 2006; Pauley, Morman, & Floyd, 2011), reduced posttraumatic health symptoms (Campbell, 2003), fewer physician visits (e.g., Pennebaker, Colder, & Sharp, 1990), higher grades (Pennebaker et al., 1990), positive effects on blood markers of immune function (Pennebaker, Kiecolt-Glaser, & Glaser, 1988), and less distress, negative affect, and depression over time (Murray & Segal, 1994). Since expressive disclosure has been linked to improved life satisfaction, mental health, and positive and negative affect (Lyubomirsky, et al., 2006; Murray & Segal, 1994; Pauley et al., 2011), we chose to focus on these psychological health indicators in the present.

A number of explanations have been offered for the benefits of expressive writing.

For example, cathartic talk may decrease anxiety by disinhibiting the person from stress surrounding the difficulty (e.g., Pennebaker, 1989). Making sense of difficulty may also allow people to determine why an event happened and how to cope (Niederhoffer & Pennebaker, 2009). In other words, by using language and giving story-like structure to their thoughts and emotions, people can resolve what has happened, feel a sense of control, and reclaim their identity.

Others have suggested that disclosure in the experimental setting prompts subsequent and helpful interpersonal communication (Pennebaker & Graybeal, 2001). Participants assigned to treatment conditions have been more likely to talk about their stress following the study (Kovac & Range, 2000) and to receive social support from friends and family (Heffner, 2002, as cited in Frattaroli, 2006). Niederhoffer and Pennebaker (2009) explain that being unwilling or unable to talk about one's upset is socially isolating. However, when people experiencing trauma share their story, it alerts friends and family that their loved one is in need of social support and connection.

Although most studies have focused on emotional sense-making through writing, Pennebaker, Hughes, and O'Heeron (1987), Murray and Segal (1994), and Lyubomirsky et al. (2006) all tested the impact of talking into a tape recorder and found similar health benefits as evidenced in writing studies. The Pennebaker et al. participants, however, also talked to an anonymous "confessor" behind a curtain. Findings showed that raters were more likely to detect crying or wavering in participants' voices when they discussed traumatic events into a tape recorder than when they disclosed to the confessor. The authors also reported that participants who were alone talked more often about the death of a close friend than did those in the confessor condition. These findings suggest that the presence of another person may inhibit participants' emotional disclosure. In addition, at least one study has examined the effects of expressive disclosure on listeners. Specifically, Shortt and Pennebaker (1992) found that individuals who listened to Holocaust survivors' accounts of their experiences and empathized with them also experienced increases in skin conductance levels (SCL), indicating increased stress. This was inversely correlated with Holocaust survivors' SCL, which benefitted from the disclosure, prompting the researchers to claim a "fundamental" difference between telling about and listening to trauma.

Thus, although seldom tested in EWP studies, interpersonal communication about difficulty is significant in the coping process, and the present study offers further insight into the benefits of interpersonal disclosure over time. Of course, the presence of another person takes on new meaning when the other person is a personal friend and an active conversational partner. To better understand how discussing trauma impacts both tellers and listeners, we turn to the research on social support.

The Benefits and Drawbacks of Giving and Receiving Social Support

Individuals cope with their difficulties interpersonally. Goldsmith (2004) reports that when people experience problems and cannot find a resolution, most indicate that they will discuss the problem with a close relational partner. Moreover, as they age, adolescents and emerging adults increasingly turn to friends rather than family members for social support (Helson, Vollebergh, & Meeus, 2006), suggesting that friendship among emerging adults is a particularly important relationship in which to investigate the impact of telling and listening focused on stress.

The Benefits and Risks of Receiving Support
Receiving social support predicts various positive psychological outcomes, including increased feelings of well-being, acceptance, relief, improved life quality (e.g., Burleson & MacGeorge, 2002), lower rates of depression (Edwards & Clarke, 2004), higher self-esteem and perceptions of competence (Franco & Levitt, 1998), and better overall adjustment (Manne, Dougherty, Veach, & Kless, 1999). Receiving support helps individuals make sense of their experiences and gain a sense of control over their distress (e.g., Wortman, 1984). In short, the benefits of social support mirror the benefits of expressive writing.

Despite the benefits of receiving interpersonal support, there are drawbacks as well. First, more distressed individuals may seek out social support more frequently, and thus their distress may heighten the anxiety of the support provider (Barrera, 1986), thereby intensifying the stress on the recipient. Second, support providers' behaviors may be regarded by recipients as unhelpful, insensitive, harmful (Burleson, 2003), and/or face threatening (Goldsmith, 2004). Third, the costs of receiving support include challenges in managing impressions, negative self-evaluations (Wills, 1983), and fear of stigmatization (Goldsmith, 1994).

Although research has outlined the potential benefits and drawbacks of social support, it is unclear whether the benefits reported in EWP studies—including decreases in negative affect and increases in positive affect, life satisfaction, and mental health—transfer to those who interpersonally communicate their stressors to friends. Just as studies grounded in the EWP have used these markers of health to assess the impact of writing over time (Frattaroli, 2006), we focus on them as indicators in the present study to assess whether interpersonally discussing problems with a friend multiple times has immediate and/or lasting effects on emerging adults' health. This enables us to determine whether interpersonal communication about stressful experiences has health benefits, particularly when multiple opportunities for sense making are permitted. Thus, we pose the following research question:

> RQ1: For tellers, does recounting a story of difficulty result in greater increases in psychological health than does talking about innocuous topics?

The Benefits and Risks of Providing Support
Because social support is inherently a collaborative and communicative event (Burleson & MacGeorge, 2002; Cutrona, 1996; Goldsmith, 2004), providing support elicits both positive and negative outcomes as well. Providing social support strengthens relational resources, social bonds, and emotional commitment, which are beneficial to relational and psychological health (Sprecher & Hendrick, 2004). Benefits incurred from helping others include improved physical and mental health (Wilson & Musick, 1999), decreased premature mortality (Brown, Nesse, Vinokur & Smith, 2003), increased happiness and self-esteem, and decreased depression (e.g., Brown et al., 2003; Schwartz & Sendor, 1999). Support providers can also achieve a heightened sense of meaning, purpose, and belonging (for review see Batson, 1998).

Yet support providers also face risks. Providers may suffer from "emotional contagion" wherein receivers' distress may negatively impact providers' own well-being (Coyne, 1976). Providing support is also emotionally taxing, which can produce emotional fatigue and/or anxiety in the support provider (Abel, 1989; Lewis & Manusov, 2009). Moreover, providers may face threats to their own desire for approval and autonomy, as well as stability (Searcy & Eisenberg, 1992) and equity in the relationship (Goldsmith, 2004).

Despite this research to date, the effects on support providers have been under-represented in comparison with recipients (cf. Lewis & Manusov, 2009). Moreover, little research has used experimental procedures (cf. Jones & Wirtz, 2006) to assess the impact of discussing difficult issues over time, despite the fact that friends often discuss difficulty more than once (e.g., Rose, 2002). Thus, in the current study, we expand on evidence from both the EWP and social support literature and pose the following research question to examine the impact of listening to friends' stories of difficulty over time:

> RQ2: How, if at all, does listeners' psychological health change over time as a function of listening to friends' stories of difficulty versus listening to friends' stories of innocuous topics?

Perceptions of Interpersonal Communication

Much of the research growing out of both the expressive writing and social support literature focuses on psychological and physical health outcomes, particularly for those disclosing about difficulty (i.e., support recipients). Yet interactional partners such as friends also assess each other in the course of talking about trauma and/or providing support. Therefore, in the current study we also assessed the impact of discussing trauma over time on perceptions about the conversational partner's interpersonal communication, including perceived face threat, communication competence, and communicated perspective-taking.

Perceived Face Threat
As indicated earlier, one of the risks of giving and receiving social support is the threat to both providers' and recipients' positive and negative face needs (Goldsmith, 1994, 2004). Negative face (i.e., desire for autonomy) may be threatened given the time and attention necessary to give and receive support. Interpersonally communicating about stress can also threaten partners' positive face (i.e., desire to be liked and respected), such that support seekers may look less desirable or competent in the eyes of the providers, and seekers may question or fail to follow support providers' advice. Because of the risk associated with face threat, expressive disclosure provides an apt proxy for assessing the impact on perception of others' interpersonal communication.

Communication Competence
Communication competence is assessed by a number of factors, including the degree to which one is effective and appropriate in his or her interpersonal reactions (Spitzberg, 1994). Query and James (1989) argue that communication competence and social support are interwoven, in part, because communication skills are needed to provide, receive, and appreciate social support. Numerous studies have found a direct link between social support skill and increased coping ability, relationship satisfaction, and physical health (see Burleson, 2003). The degree to which one perceives a conversational partner as communicatively competent is also relevant to understanding the quality of the interaction and the impact of it on individual well-being. For example, Afifi, Granger, Denes, Joseph, and Aldeis (2011) found that adolescents were better able to cope with and recover from stress when they perceived their parents to be communicatively competent. Thus, perceptions of others' competence are linked with the ability to cope with stress and are therefore relevant to understanding the interpersonal implications of talking about stress over time.

Communicated Perspective-Taking

Finally, effectively talking about stress includes a number of interactional behaviors, including communicated perspective-taking or the degree to which interactional partners communicate in ways that show they acknowledge, confirm, and/or understand the other person's experience, point of view, or perspective (e.g., Trees & Koenig Kellas, 2009). Participants in Koenig Kellas et al.'s (2013) study identified a number of perspective-taking behaviors, including similarity/agreement, engagement, space to talk, relevant contributions, positive affect, and coordination. Perspective- taking has been linked to positive perceptions of support, family satisfaction, cohesion, and adaptability (e.g., Trees & Koenig Kellas, 2009), as well as husbands' mental health and perceived stress (Koenig Kellas, Trees, Schrodt, LeClair Underberg, & Willer, 2010). Given the potential impact communicated perspective-taking has within the context of storytelling interactions, it is relevant to understanding the interpersonal impact of talking about stress.

In sum, although the EWP and research on social support have elucidated the health benefits of disclosing trauma, little research has considered the possible interpersonal effects of talking about or listening to stories of stress over time. To test the impact of expressive interpersonal communication (i.e., telling a friend a stressful story) on both tellers' and listeners' perceptions of interpersonal communication, we pose the final two research questions:

RQ3: How, if at all, do tellers' perceptions of their friends' perspective-taking, communication competence, and face threat differ as a function of time and/or conversation topic?

RQ4: How, if at all, do listeners' perceptions of their friends' perspective-taking, communication competence, and face threat differ as a function of time and/or conversation topic?

METHOD

Participants

Participants were 49 college student friend dyads (19–35 years old, M = 20.8, SD = 3.09). The sample contained 51 men (52%) and 47 women (48%) in same-sex (n = 34, 69.4%) and mixed-sex (n = 15, 30.6%) pairs. Most participants identified as White (n = 77, 78.6%), with nine identifying as Asian American (9.2%), three African American (2.1%), two Hispanic (2.0%), two Native American (2.0%), and 10 "Other" (10.2%). The length of friendships ranged from 0 to 192 months (M = 29.96, SD = 37.83), and participants rated their friendship closeness on average as 3.62 (SD = 1.29) on a 5-point Likert-type scale (1 = not at all close, 5 = extremely close). Neither friendship length nor closeness was significantly correlated with any of the dependent variables in the study. Participation was elicited through communication studies courses at a medium-sized university in the Midwest. Student participants received class extra credit, and all others were entered into a raffle for one of five $10 iTunes gift cards.

Procedures

Based on the goals of the study, we adapted the procedures typically used in the EWP (see Frattaroli, 2006) for interactions between friends. This included modifying the instructions

from writing about trauma to telling a friend a story about an event or experience that was currently bothering them. Participation in the present study took place over the course of 4 weeks. Participants first contacted a research assistant to schedule three sessions in one week, occurring on Monday, Wednesday, and Friday. Once scheduled, the research assistant randomly assigned participants into the treatment (telling/listening to a story of difficulty) and control groups (telling/listening to the events of the teller's day) via a random number generator, and then randomly assigned them into teller or listener roles based upon the alphabetical listing of the last letter of their first name. Independent samples t-tests were run to ensure that members of the treatment and control groups were equivalent on all prestudy variables. No differences were found on any of the prestudy variables, including friendship satisfaction, negative affect, positive affect, satisfaction with life, mental health, friendship closeness, friendship length, and age.1 Thus, the groups were considered equivalent prior to treatment.

Preinteraction

A research assistant then emailed participants a link to the pre-interaction online survey, including the informed consent form, demographic information, and assessments of psychological health variables—life satisfaction (Diener, Emmons, Larsen, & Griffen, 1985), positive and negative affect (Watson, Clark, & Tellegen, 1988), and mental health (Stewart, Hays, & Ware, 1988). Participants were asked to complete this survey within 24 hours prior to their scheduled appointment, to limit potential treatment effects.

Day 1. The interactional portion of the study took place over 3 days. On Day 1, participants came into the lab, were separated, and were asked to complete a series of measures. In the treatment group, listeners2 first completed self-report measures not relevant to the current study. Tellers completed similar measures, plus a modified version of the Life Experience Questionnaire (LEQ; Lyubomirsky et al., 2006) to determine the topic of their difficult story.

Upon completion of the measures, participants were reunited and given instructions for the storytelling exercise. Tellers were instructed to tell the story of difficulty they selected with instructions adapted from Lyubomirsky et al. (2006), including talking about their deepest thoughts and feelings and connecting the story to relationships, identity, past, present, and future.3

To encourage typical interaction, listeners were told, "There is no right or wrong way to interact, and you are free to interact, talk, ask questions, interject, or keep quiet, etc. The point is for you to interact as you normally would if he or she was telling this story in a place where you typically get together." The researcher then left the room to turn on video-recording equipment and to allow participants to converse for 10 minutes. Once they concluded their conversation, each completed the measures assessing psychological well-being, as well as measures related to their perceptions about their friends' interpersonal communication, including other's communicated perspective-taking, communication competence (Guererro, 1994), and face threats (Cupach & Carson, 2002).

Control group participants completed measures identical to those in the treatment group, excluding the LEQ. After completing the measures separately, participants were reunited and given interaction instructions. Tellers were directed to discuss the events of their day (or the day before if the appointment was in the morning) (i.e., "Go through and list what you did today for your friend. Tell them as many things as you can remember from this morning until now"), and the listeners were told to interact as they normally would if a friend were talking to them about the events of his or her day. The researcher

left the room and the friend pairs engaged in conversation for 10 minutes. After this time, participants were again separated and asked to complete measures identical to the post-interaction surveys for the treatment group.

Days 2 and 3. Procedures for the treatment and control groups for Day 2 and Day 3 were nearly identical to those for Day 1. The exception was that treatment-group tellers were reminded to talk about the same difficult life experience selected on Day 1, and neither group completed pre-interaction questionnaires.

Poststudy follow-up. The final installation of the study required all participants to complete an online poststudy questionnaire including measures of psychological health and interpersonal perception three weeks after their last interaction appointment.

Measures

Difficult Life Experience

Participants listed and rated difficult life experiences using an adapted version of the Life Experience Questionnaire (LEQ; Lyubomirsky et al., 2006). The questionnaire instructed participants to list three "difficult experiences that have occurred in your lifetime" and then directed them to rate each experience on a series of 10- point Likert-type items regarding the degree to which they had previously talked to others about the experience and how upsetting, significant, and resolvable it was. Higher scores indicated higher levels of each construct. Participants were also asked to report on the recency of the experience (M = 2.30 years, SD = 1.92). The researcher then helped tellers select a story from their LEQ by calculating the one that had the highest combined scores of being bothersome, significant, recent, and infrequently discussed. In the current study, participants reported their experiences to be moderately upsetting (M = 6.45, SD = 1.77), very significant (M = 8.09, SD = 1.65), and somewhat unresolvable (M = 4.45, SD = 2.50), and that they spent a moderate amount of time talking with others about the experience (M = 4.55, SD = 2.11). Experiences reported included a loved one's poor health or death (n = 7), family trouble (n = 4, e.g., "not being good enough for my dad"), problems with school (n = 4, e.g., "failing a class"), drinking infractions (n = 3, e.g., "DUI"), mental health issues (n = 2, e.g., "thinking about suicide"), breaking up (n = 1), and moving (n = 1).

Positive and Negative Affect

Positive and negative affects were assessed by the Watson et al. (1988) Positive and Negative Affect Scale (PANAS). The PANAS measured the participant's current affective state through a 20-item scale on two dimensions, positive affect and negative affect. Higher scores indicate higher positive or negative affect, respectively. This 5-point (1 = very slightly or not at all, 5 = extremely), Likert-type scale includes items such as "Enthusiastic" (positive affect) and "Afraid" (negative affect). In the current study, both positive and negative affect were measured reliably and summed to create separate scores for positive and negative affect at each time point. **Table 1** presents means, standard deviations, and reliabilities for each variable across time points.

Satisfaction With Life

Participants' perceived satisfaction with life was measured through the Satisfaction With Life scale (SWL), a five-item unidimensional measure (Diener, Emmons, Larsen, & Griffin, 1985). This Likert-type scale (1 = strongly disagree, 7 = strongly agree) included items such as "In most ways my life is close to my ideal" and "The conditions of my life are excellent." Higher scores indicated more satisfaction with life. The SWL has been used to assess well-

being in expressive writing studies (e.g., α = .88–.89; Lyubomirsky et al., 2006), and it was measured reliably in the current study (see Table 1).

Mental Health
Mental health was measured using the mental health subscale of the Medical Outcomes Study (MOS) (Stewart et al., 1992). This scale included nine items rated on a 6-point Likert-type scale (1 = not at all, 6 = extremely) about how participants felt at the time of the survey, including, "Do you feel full of pep?" and "Do you feel downhearted and blue?" Five items were reverse coded such that higher scores indicated higher levels of mental health. Items were averaged and could therefore range from 1 to 6, with higher scores indicating higher mental health.

TABLE 1. Descriptive Statistics for Psychological Health and Interpersonal Communication Perception Variables Across Time

Variable	Time	M	SD	a
Negative affect	Prestudy	16.05	6.30	.87
	Day 1	14.77	4.84	.82
	Day 2	13.57	4.47	.83
	Day 3	12.75	3.43	.75
	Poststudy	14.83	5.82	.87
Positive affect	Prestudy	34.00	8.38	.90
	Day 1	30.76	7.39	.85
	Day 2	31.08	9.97	.95
	Day 3	29.57	10.05	.95
	Poststudy	28.54	9.79	.94
Satisfaction with Life	Prestudy	26.68	5.73	.86
	Day 1	26.96	6.03	.89
	Day 2	27.45	6.29	.90
	Day 3	27.49	6.30	.91
	Poststudy	27.40	6.66	.93
Mental health	Prestudy	4.50	.74	.82
	Day 1	4.34	.82	.83
	Day 2	4.53	.70	.79
	Day 3	4.47	.81	.82
	Poststudy	4.41	.79	.82
Communicated Perspective Taking	Day 1	4.37	.41	.85
	Day 2	4.30	.45	.87
	Day 3	4.28	.48	.89
	Day 4	4.22	.47	.90
Communication Competence	Day 1	4.22	.54	.81
	Day 2	4.24	.52	.77
	Day 3	4.27	.54	.80
	Day 4	4.08	.56	.77
Perceived Face Thread	Day 1	1.62	.34	.72
	Day 2	1.64	.40	.76
	Day 3	1.65	.39	.76
	Day 4	1.76	.43	.80

Other Communicated Perspective-Taking
Based on research by Koenig Kellas et al. (2013), a scale was developed for the current study to measure the degree to which conversational partners perceived that their friend engaged in communicated perspective-taking. The scale includes 19 items, rated on 5-point

Likert scales (1 = strongly disagree, 5 = strongly agree), that measure the degree to which the conversational partner demonstrated communicated perspective-taking, such as similarity ("My friend disagreed with me during our interaction"), attentiveness ("My friend listened to me when I told my story"), relevant contributions ("My friend helped me say what I wanted to say"), coordination ("My friend and I were in sync during our conversation"), positive affect ("My friend used humor during our interaction"), and giving the friend room to talk ("My friend gave me plenty of space to tell my story"). Six items were recoded prior to analysis so that higher scores reflected higher quality perspective taking. Reliability statistics (see Table 1) indicate the acceptability of treating the scale unidimensionally. Thus, all 19 items were averaged to produce an overall score for participants' perceptions of their friends' perspective-taking behavior.

Other Communication Competence
Guerrero's (1994) Other Communication Competence Scale was used to report on participants' perceptions of their partner's communication competence. The measure instructed the participant to rate "your friend's ability to listen and communicate his/her ideas" on a six-item, 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Two items were reverse coded and thus higher scores indicate perceptions of more communication competence. Items included "my friend is a good communicator" and "my friend has a wide variety of social skills." The scale was reliable (see Table 1).

Perceived Face Threat
Finally, participants reported on their friend's tendency to threaten their face during their social interaction using Cupach and Carson's (2002 Perceived Face Threat measure. This 14-item measure assesses the extent to which participants believe their partner exhibited face-saving or face-threatening actions, with higher scores indicating more face-threatening behavior. The 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) includes items such as "During the interactions, my friend was rude" and "During the interactions, my friend constrained my choices." Based on reliability, the scale was used unidimensionally in the current study (see Table 1). Four items were reverse coded and all items were averaged such that higher scores indicate higher degrees of perceived face threat.

Results

Overview of Statistical Analyses
To account for interdependence in the data between teller and listener pairs, separate repeated-measures analyses of variance (ANOVAs) and multivariate analyses of variance (MANOVAs) for tellers and listeners were run to assess differences between treatment and control groups on the well-being and communication perception dependent variables over time. To address RQ1 and RQ2, we ran a series of repeated-measures ANOVAs on the well-being dependent variables. Tables 2 and 3 provide the intercorrelations [4] and the communication perception variables, respectively. Based on the between the psychological health variables strong correlations between all three communication perception variables, a series of repeated-measures MANOVAs was run to assess the degree to which condition (treatment vs. control) predicted changes in the linear combination of the dependent variables over time (RQ3 and RQ4).

Table 2. Correlations Among Well-Being Variables

	NApre	NA1	NA2	NA3	NApst	PApre	PA1	PA2	PA3	PApst	SATpre	SAT1	SAT2	SAT3	SATpst	MHpre	MH1	MH2	MH3	MHpst
NApre	1.00	.26**	.44**	.43**	.19*	-.03	.12	-.01	.12	.05	-.13	-.12	-.18*	-.08	-.15	-.44**	-.26**	-.27**	-.08	-.12
NA1		1.00	.52**	.45**	.30**	-.04	-.10	.02	-.04	.12	-.02	-.14	-.05	-.08	-.00	-.20*	-.33**	-.23*	-.18*	-.15
NA2			1.00	.68**	.51**	-.05	.05	.02	.08	.15	-.08	-.09	-.13	-.11	-.09	-.46**	-.31**	-.45**	-.20*	-.30*
NA3				1.00	.49**	.00	.12	.08	.07	.15	.01	-.05	-.06	-.03	-.06	-.26**	-.23*	-.23*	-.20*	-.17
NApst					1.00	.05	.03	-.05	-.21*	.04	-.12	-.15	-.14	-.06	-.18*	-.31**	-.25**	-.30**	-.36**	-.49**
PApre						1.00	.43**	.56**	.48**	.53**	.33**	.26**	.26**	.31**	.21*	.42**	.39**	.30**	.32**	.28**
PA1							1.00	.64**	.70**	.66**	.13	.14	.10	.16	.16	.28**	.47**	.39**	.46**	.45*
PA2								1.00	.70**	.76**	.44**	.35**	.42**	.43**	.41**	.44**	.51**	.64**	.55**	.58**
PA3									1.00	.66**	.33**	.36**	.31**	.40**	.38**	.38**	.45**	.46**	.75**	.66**
PApst										1.00	.37**	.27**	.32**	.34**	.37**	.39**	.51**	.43**	.45**	.61**
SATpre											1.00	.82**	.87**	.87**	.82**	.53**	.51**	.50**	.54**	.52**
SAT1												1.00	.89**	.94**	.89**	.46**	.51**	.45**	.51**	.51**
SAT2													1.00	.94**	.91**	.52**	.51**	.53**	.58	.53
SAT3														1.00	.93**	.53**	.53**	.54**	.58**	.57**
SATpst															1.00	.50**	.49**	.45**	.55**	.55**
MHpre																1.00	.76**	.73**	.68**	.66**
MH1																	1.00	.71**	.67**	.75**
MH2																		1.00	.70**	.75**
MH3																			1.00	.73**
MHpst																				1.00

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

Table3. Correlations Among Communication Perception Variables

	OCPT1	OCPT2	OCPT3	OCPTpost	PFT1	PFT2	PFT3	PFTpost	OCCpost	OCC1 (PCC1)	OCC2	OCC3
OCPT1	1.00											
OCPT2	.69**	1.00										
OCPT3	.74**	.74**	1.00									
OCPTpost	.69**	.59**	.72**	1.00								
PFT1	.64**	.56**	.60**	.75**	1.00							
PFT2	.56**	.74**	.61**	.53**	.70**	1.00						
PFT3	.60**	.65**	.65**	.67**	.58**	.65**	1.00					
PFTpost	.75**	.53**	.72**	.60**	.62**	.63**	.70**	1.00				
OCCpost	-.45**	-.47**	-.46**	-.39**	-.43**	-.58**	-.48**	-.39**	1.00			
OCC1	-.62**	-.50**	-.49**	-.53**	-.58**	-.75**	-.51**	-.63**	.71**	1.00		
OCC2	-.48**	-.46**	-.76**	-.56**	-.52**	-.52**	-.60**	-.46**	.62**	.70**	1.00	
OCC3	-.51**	-.55**	-.53**	-.78**	-.52**	-.53**	-.49**	-.55**	.63**	.63**	.70**	1.00

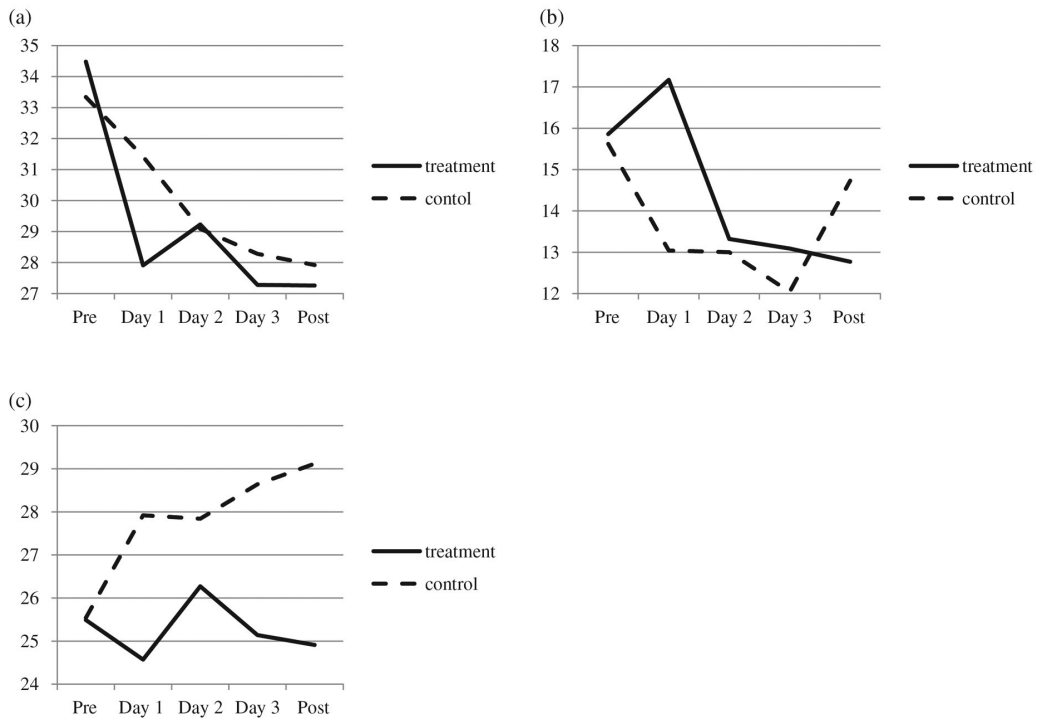*p < .05. **p < .01.

(a)

(b)

(c)

FIGURE 1 Significant within- and between-subjects effects for tellers on psychosocial health variables: (a) positive affect, (b) negative affect, (c) satisfaction with life.

Research Question 1

Research question 1 asked whether tellers in the treatment group would experience significantly greater psychological health over time in comparison to control group tellers. Treatment and control group tellers did not differ significantly from one another on positive affect, $F(4,160) = .77$, $p = .55$, partial $\eta2 = .02$; however, there was a significant within-subjects effect for time, $F(4,160) = 7.58$, $p = .001$, partial $\eta2 = .16$. Examination of means and plots (see Figure 1a) suggests that tellers, regardless of condition, experienced a decrease in positive affect over time. Follow-up pairwise comparisons on the within-subjects effect using the Bonferroni method to control for Type I error (.05 divided by the number of comparisons; .05/10 = .005) indicated significant differences across all tellers between the prestudy questionnaire (M = 33.95) and all other time points (Day 1, M = 29.81, SD = 7.82, $t(47) = 3.00$, $p = .004$; Day 2, M = 29.16, SD =9.76, $t(44) = 3.74$, $p = .001$; Day 3, M = 27.83, SD = 9.68, $t(45)= 4.08$, $p < .001$; Poststudy, M = 27.61, SD = 9.48, $t(48) = 4.87$, $p < .001$). Thus, across tellers, positive affect decreased significantly over time.

For negative affect, there was a significant interaction effect between time and condition for tellers, $F(4, 168) = 3.46$, $p = .01$, partial $\eta2 =.08$. Follow-up pairwise comparisons using the Bonferroni method indicated that treatment tellers reported significantly higher negative affect (M=17.17, SD = 5.26) after the first interaction (Day 1) than did tellers in the control group (M=13.04, SD =3.32), $r(46) = 3.28$, $p = .002$. There was also a significant within subjects effect for time on negative affect, $F(4, 168) = 6.74$, $p < .001$, partial $\eta2 = .14$. Follow-up pairwise comparisons indicated significant differences across all (treatment and control) tellers on negative affect between the prestudy (M = 15.82, SD = 5.81) and the pos-

tinteraction measures on Day 3 (M = 12.56, SD = 2.75), t(44)=3.91, p < .001, and between the Day 1 (M= 15.09, SD = 4.83) and Day 3 interaction. In both cases, as indicated in Figure 1b, despite a sharp rise in negative affect for treatment tellers after the first interaction, negative affect decreased over time for tellers in the treatment group. It also decreased for the control group, but rose slightly, although nonsignificantly, at the follow-up 3 weeks later.

For satisfaction with life, the within-subjects effect for time was significant, F(4, 176) = 3.73, p =.006, partial η^2 = .08, and the interaction between time and condition approached significance, F(4,176)=2.03, p=.09, partial η^2 = .04. Follow-up analyses on the interaction suggest a trend, t(47)=2.07, p=.04, for participants in the control group to report higher levels of life satisfaction (M=29.12, SD = 6.02) at the poststudy than did participants in the treatment group (M = 24.91, SD = 8.15). After controlling for Type I error using Bonferroni's method, none of the pairwise comparisons between within-subjects time points were significantly different; however, the trend was for a difference between the prestudy measurement of life satisfaction across tellers (M= 26.06, SD = 6.18) and the Day 2 (M=27.11, SD=6.73) and Day 3 (M=27.00, SD = 6.75) postinteraction. In sum, satisfaction with life increased over time and did so marginally more for tellers in the control group than for tellers in the treatment group (see Figure 1c).

Finally, there were no significant statistical interactions between time and condition on mental health for tellers, F(4,152) = 1.81, p = .13, partial $\eta2$ = .05, nor a significant within-subjects effect for time on mental health for tellers, F(4, 152) = .42, p = .80, partial $\eta2$ = .01.

Research Question 2

The second research question examined the psychological health effects of listening to a story of difficulty over time in comparison to listening to a friend's daily activities. Similar to tellers, listeners' positive affect decreased significantly over time, F(4, 168) = 4.11, p = .003, partial $\eta2$ = .09, but not according to group condition, F(4, 168) = 1.39, p = .24. Follow-up pairwise comparisons using the Bonferroni method showed significant differences between prestudy (M = 33.92, SD = 9.09) and poststudy (M = 29.48, SD = 10.12) scores on positive affect for listeners, t(47) = 3.50, p = .001, and between Day 2 (M = 32.70, SD = 9.95) and poststudy scores t(44) = 3.35, p = .002. These findings and Figure 2a demonstrate a pattern by which positive affect decreased for listeners over time.

For negative affect, the interaction between time and condition was nonsignificant, F(4, 152) = 1.81, p = .13, partial $\eta2$ = .03, but the within-subjects effect for time was significant, F(4,152)=5.10, p = .001, partial $\eta2$ = 12. Follow-up pairwise comparisons using the Bonferroni method indicate that for listeners across both conditions negative affect differed between the prestudy (M = 16.48, SD = 7.05) and Day 2 (M = 14.06, SD = 4.75) as well as Day 3 (M = 12.70, SD = 3.64). In addition, Day 3 scores on negative affect differed significantly from poststudy reports of negative affect (M = 15.93, SD = 6.72). Figure 1b displays a pattern in which negative affect drops significantly at Day 2 and Day 3, but rises sharply at the 3-week follow up. Finally, for listeners, neither the interaction between time and condition nor the within-subjects effect for time was significant for satisfaction with life or mental health.5

Research Questions 3 and 4

In order to test the final research questions, which investigated the impact on tellers' (RQ3) and listeners' (RQ4) perceptions of their friends' interpersonal communication over time, a repeated-measures MANOVA with condition (treatment vs. control) as the grouping vari-

able and other communicated perspective-taking, other communication competence, and perceived face threat as the dependent variables. Time (Day 1, Day 2, Day 3, and Post-study) was the within-subjects variable. Results indicate significant multivariate within-subjects effects for tellers on time, Wilks's = .60, F(9, 35) = 2.61, p = .02, partial η2 = .40, and the interaction between time and treatment, Wilks's = .54, F(9, 35) = 3.30, p = .005, partial η2 = .40. Between-subjects multivariate effects were not significant, Wilks's = .98, F(3, 41) = .34, p = n.s., partial η2 = .02, indicating that tellers in the treatment and control group did not differ significantly on the dependent communication perception variables over time. For listeners, neither the between-subjects (Wilks's = .98, F(3, 39) = .29, p = n.s., partial η2 = .02) nor the within-subjects effects overtime (Wilks's = .69, F(9, 33) = .1.64, p = n.s., partial η2 = .31), nor the interaction between time and condition (Wilks's = .83, F(9, 33) = .75, p = n.s., partial η2 =.17) was significant.

Thus, univariate ANOVAs were performed to test the nature of the within subjects main effects for tellers only. The significant interaction between time and treatment found in the multivariate tests was nonsignificant in the univariate ANOVAs; therefore, only the main effects for each dependent variable are discussed below. In order to control for Type I error, follow-up ANOVAs were tested at the p = .02 level using the Bonferroni method (.05/3 = .02).
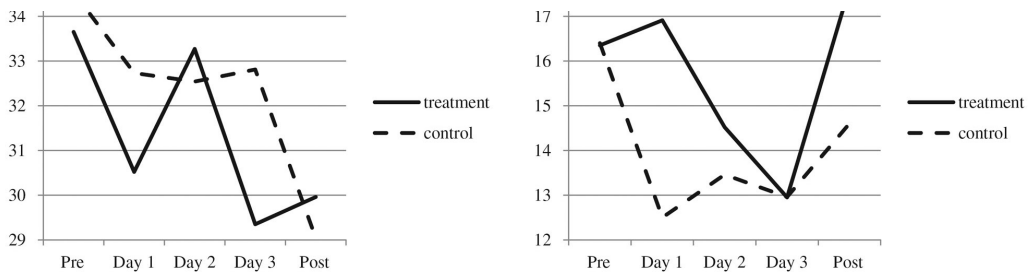

FIGURE 2 Significant within- and between-subjects effects for listeners on psychosocial health variables: (a) positive affect; (b) negative affect.

Other Communicated Perspective-Taking
There was a significant within-subjects main effect for tellers' perceptions of their friends' communicated perspective taking over time, F(3, 129) = 4.96, p = .003, partial η2 = .10. Pairwise comparisons tested at the .008 level (.05/6 comparisons over the different time points) indicate that tellers' ratings of their friends' communicated perspective-taking differed significantly from Day 1 (M = 4.40, SD = .43) to Poststudy (M = 4.21, SD = .50), p = .001. Poststudy responses were also marginally different from Day 2 (M = 4.32, SD = .44, p = .02) and Day 3 (M = 4.32, SD = .43 p = .02). These results, along with Figure 3a, illustrate a pattern in which both treatment and control group tellers' perceptions of their friends' perspective taking declined over time.

Other Communication Competence
The same pattern emerged for communication competence. The univariate ANOVA follow-up test indicated a significant main effect for tellers' perceptions of their friends' com-

munication competence over time, $F(2.62, 129) = 6.45$, $p = .001$, partial $\eta2 = .13$. Tellers perceived their friends as significantly less communicatively competent at the poststudy follow-up ($M = 4.08$, $SD = .66$) than at Day 2 ($M = 4.21$, $SD = .57$, $p = .006$) and Day 3 ($M = 4.29$, $SD = .52$, $p = .001$). As indicated in Figure 3b, the pattern for both treatment and control tellers indicates a rise in perceptions of communication competence after the third and final interaction; however, those perceptions declined similarly for both groups 3 weeks later.

Perceived face threat
Univariate tests showed a main effect for tellers' perceptions of face threat over time, $F(2.75, 129) = 4.35$, $p = .008$, partial $\eta2 = .09$. Pairwise comparisons again illustrate that by the poststudy follow-up ($M = 1.75$, $SD = .47$), tellers' perceptions changed significantly from Day 2 ($M = 1.61$, $SD = .39$, $p = .005$) and Day 3 ($M = 1.64$, $SD = .36$, $p = .005$), such that perceptions of friends' face threats increased over time (see Figure 3c).
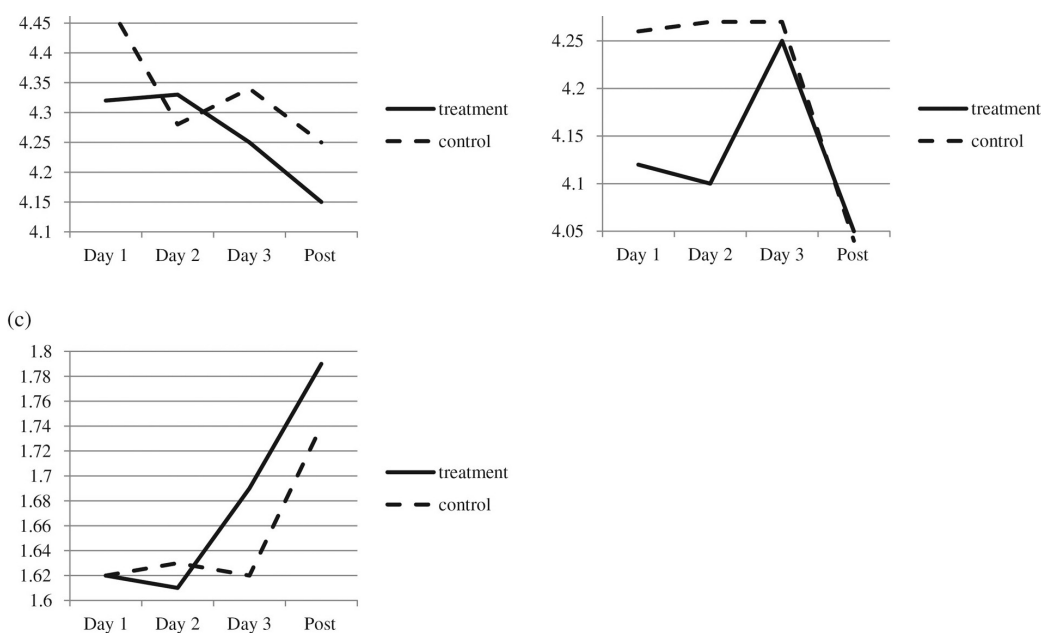

FIGURE 3 Significant within-subjects effects for tellers on perception of communication variables: (a) other communicated perspective-taking, (b) other communication competence, (c) perceived face threat.

Discussion

This study assessed the effect of repeated interpersonal interactions on emergent adult tellers' and listeners' health outcomes, and perceptions of each other's communication across

treatment and control conditions. In so doing, the current study adds to the literature on expressive writing and social support in four important ways. First, to our knowledge, it provides the first application of the EWP to interpersonal communication between college-aged friends. Thus, the current study provides initial evidence into the benefits and risks of expressing difficulty interpersonally and therefore positioning interpersonal communication about difficulty in comparison with writing or talking into a tape recorder. Second, the current study adds to the social support research by focusing on the effects of providing social support on the often-neglected provider. It also looks at the effects of listening to a friend's difficulty over time, providing supporting evidence into the potential toll co-ruminating might have on friends (Rose, 2002). Third, the findings provide insight into an avenue for helping to reduce stress and therefore manage health-related consequences afflicting emerging adults. Fourth, this study paints a portrait of friends' impressions of each other's communication behavior in the context of discussing difficulty over time in a way that should inform future interpersonal interventions. Overall, in line with previous expressive writing studies, the results suggest that tellers' negative affect decreased over time for participants exposed to the treatment group (i.e., those who told a story of a difficult life experience); however, other findings paint an interesting and somewhat unexpected portrait of the variations between tellers and listeners across experimental conditions over time.

Tellers' Psychological Well-Being

Given the contradictory results in previous literature that suggest both benefits and drawbacks to disclosure and receiving support, in Research Question 1, we asked whether tellers who recounted a story of difficulty to a friend over time evidenced greater psychological benefits when compared to talking about more innocuous topics. Negative affect decreased over time for tellers, and increased significantly for treatment tellers after Day 1, in contrast with control tellers. These findings are consistent with research from the expressive writing paradigm, which shows an increase in negativity at Day 1 (likely based on the emotions evoked from discussing trauma) followed by decreases over time (see Frattaroli, 2006).

Similarly, positive affect dropped significantly for tellers in both groups on Day 1, but continued to significantly decrease over time. Most research from the expressive writing paradigm shows increases in psychological health, such as positive affect, for tellers; however, there are exceptions. For example, Fivush, Marin, and Crawford (2007) conducted a study in which 8- to 13-year-olds wrote about interpersonal problems and attributions for others' behavior and found an increase in depression and anxiety over time. The Fivush et al. participants wrote about interpersonal problems, and participants in the current study communicated about their problems interpersonally. Perhaps a focus on communicating interpersonally adds complexity (i.e., having to consider another viewpoint; recognizing interdependence) that further stresses participants in a way that would help explain decreases in psychological well-being in both studies. It may also be that asking tellers to recount a story of difficulty over time may function as sort of a "directed" rumination, which has been linked to decreases in well-being in other longitudinal studies (e.g., Michl, McLaughlin, Shepherd, & Nolen-Hoeksema, 2013).

In contrast with EWP studies, results also indicated that although life satisfaction increased across all time points, it did so marginally more for tellers who talked about the events of their day than for tellers who discussed a difficult life experience. This may be explained in a few ways. First, to minimize risk and protect human subjects, we asked par-

ticipants to talk about difficult experiences that were still bothering them, but not the worst or the most traumatic experience of their lives as many expressive writing studies do (e.g., Lyubomirsky et al., 2006). These protections, while important and necessary, may help to explain why differences between treatment and control conditions were minimal and why expected variables, like mental health, may not have improved with treatment. Second, the potential variety of conversational topics in the control group may account for increase in general life satisfaction. Participants were simply asked to discuss the events of their day with their friend. Thus, discussions may have included experiences that were stressful or upsetting, giving tellers the opportunity to disinhibit. Alternatively, talking about their day may have been pleasant or resulted in a sense of accomplishment and therefore been more satisfying than discussing difficulty. Having a friend simply listen to and validate their day, however mundane it might have been, also could be rewarding for tellers. Similarly, simply being asked to talk about their day while being video-recorded may have lent a sense of importance to these events for participants.

In sum, and consistent with EWP research, tellers' negative affect decreased over time. However, this was true for tellers across conditions, suggesting that talking to a friend in general, and not about problems specifically, may be useful in ameliorating negative affect. Talking, however, seemed to dull high arousal emotions associated with positive affect, and surprisingly did not improve mental health in the short or longer term. It may be, as illustrated below, that discussing difficulty with friends introduces more complications than writing, thereby stunting some of the health benefits found in the EWP.

Listeners' Psychological Well-Being

The current study also provides important initial evidence into the health effects on friends who serve in the role of support providers. Like tellers, listeners' positive affect decreased significantly across time. Although negative affect decreased significantly across the interactions, it also increased significantly for listeners at the poststudy follow up. Thus, there was a linear decline in positive affect and a curvilinear pattern for negative affect. Neither of these findings were explained by experimental condition. Findings for decreases in positive affect may be supported by research by Albrecht et al. (1994), who discuss support providers' frustration when they cannot help their partner cope or "fix" their problem. It may be that difficult situations were "unsolvable" for the listener (e.g., grandma passing away), so they may have felt ineffectual in their ability to provide social support. The decrease in positive affect—for both tellers and listeners—also may be explained by the nature of the measure itself. Items on the PANAS are indicative of arousal, asking participants to rate the degree to which they feel strong, proud, and inspired, to name a few. Hearing about a friend's difficulty—or even the mundane and/or stressful parts of a friend's day—may cumulatively cause listeners to "come down from" these high arousal emotions. Participants also may have been less excited to hear about each other's experiences and to receive each other's feedback as time went on.

Decreases in negative affect for listeners over the course of the interactions may be explained by social comparison. Hearing about a friend's negative experience (or mundane stressful days) may help one to reevaluate one's own situations and feelings in a less negative light. The sharp increase in negative affect 3 weeks later could be a function of the cumulative effect of ruminating about rather than interpersonally talking about their friends' lives and/or removal from the experimental condition, which put their own negative emotions into perspective. The current study offers initial insights into the effects of hearing about a friend's difficulty over time. These and other possible explanations should

be tested further to enhance our understanding of the effects of listening to or providing support about friends' problems.

Implications for College Students' Health

Results from the current study offer insights about how emerging adults' health is affected by telling and listening to difficult stories. When discussing a difficult experience, both positive and negative affect decreased over time, although participants were generally more satisfied with their lives at the conclusion of this study. Taken together, these findings suggest that talking about difficult experiences may simply minimize the event's impact—both positive and negative—over time, but may also allow emerging adults to more fully integrate the experience into their life, resulting in greater satisfaction overall. Increased life satisfaction is consistently associated with a variety of favorable health outcomes, including physical exercise, better nutritional choices, and not smoking (Grant, Wardle, & Steptoe, 2009), and the health benefits of being satisfied with life overall may be more enduring than short-term variations in affect (Pressman & Cohen, 2005). Thus, the increase in life satisfaction by the conclusion of this study suggests that discussing difficult experiences with friends does potentially create positive health changes in other areas of college students' lives.

The current study confirmed a similar pattern for college students' listening to others' difficult experiences, in that listeners' positive and negative affect both decreased after each interaction, but negative affect significantly increased for listeners in the post-study follow up 4 weeks later. This sharp accumulation of negative affect suggests that, in small doses, listeners are able to manage the negative consequences of listening to others talk about their difficult experiences, but reflecting on these experience may have detrimental health consequences over time. The chronic experience of negative affect may lead college students to engage in risky health behaviors such as substance abuse, overeating, and high-risk sexual activity (Mayne, 1999). Although the current study only provides initial evidence, the provision of support through listening to peers' difficult experiences may indeed come with a cost.

Perception of Friends' Communication

Finally, given the strong links between relational functioning and providing and receiving social support, the current study examined how friends assess each other's interpersonal communication over time in the context of discussing stress. Significant effects were found only for tellers whose impressions of their friends' interpersonal communication steadily decreased over time. The decline in tellers' perceptions of listeners' communicated perspective-taking and communication competence and the increase in perceptions of face threat over time may help to explain the effects on psychological health, including decreases in positive affect across participants, increases in negative affect for listeners, and the lack of significant differences in mental health described in the preceding. For example, studies show that co-rumination predicts depression and anxiety (e.g., Rose, 2002). Moreover, it may be that listeners become disenfranchised with tellers who continually talk about their problems, causing them to disengage. Such distancing may bring tellers back to feeling isolated. Perhaps listeners allow themselves to become less skillful over time in responding to the teller, resulting in increased face threats and decreased perspective taking and competence. Consistent with Pasupathi's (2001) discussion of the importance of listeners in (re)storying difficult events, when listeners seem increasingly disinterested, tellers may not experience many benefits from the process of telling the story. They, in turn,

may then become disappointed in the listeners and their communication abilities.

    Attribution biases may also help to explain these findings. By the end of the third interaction, perceptions of the listeners' communication competence remained steady for tellers in the control group and increased for tellers in the treatment group. Both, however, reported a significant drop in perceptions of listeners' competence by the poststudy follow-up 3 weeks later. It could be that tellers were operating under the negativity bias, or the tendency to make more negative attributions for others when not afforded the chance to interact with them (Kellerman, 1984). In other words, rating the other person's communication competence outside the interactional context may help to explain decreases in the poststudy perceptions of competence. Alternatively, the study itself may have prompted tellers to discuss the difficult or daily events with friends aside from their study partner. Comparisons to nonstudy friends' communication skills with those of their study partners thus may have predicted decreases in their perceptions of the study partner following the study.

    In sum, the decrease in tellers' perception of listeners' competence, perspective taking, and facework illustrates some of the complexities at work when discussing difficulty with a friend over time. These findings introduce an opportunity for research on specific listener behavior that might explain the decline in quality listening, as well as the reasons tellers provide for their less favorable ratings of their friends. The current results provide initial evidence that both support seekers and providers may have a threshold of tolerance for talking about and listening to problems.

Limitations and Conclusions

Despite its contribution to the literature on expressive writing and social support, the current study also had limitations. First, the sample was comprised of primarily white college students. Second, some power estimates were limited by sample size. Third, some of the difficult events discussed in the treatment condition were less severe than others (e.g., earning a poor grade in a class vs. the death of a friend or family member), so the sense-making process (and the necessity of engaging in it multiple times) may have varied. Although the results of the LEQ approximated previous expressive writing studies (e.g., Lyubomirsky et al.'s, 2006) in terms of recency, significance, and amount of talk, the experience was less upsetting for our participants than in other expressive writing studies (i.e., Lyubomirksy's M = 9.01; current study M = 6.45). Discussing significant trauma may be necessary for health benefits; however, the risks associated with such a research design, particularly in light of the current decrease in perceptions of interpersonal communication and some well-being variables, may outweigh the cost. Finally, elements of the friendship, characteristics of the listener, and qualities of the listening not measured in the current study may impact listener response. For example, Lewis and Manusov (2009) found that listeners' "felt responsibility" to their friends, the degree to which they were validating, and time spent listening were inversely related to distress for listeners. Future research should tease out possible confounding variables experimentally.

    Overall, these results provide an interesting first look into the impact of interpersonal expressive disclosure on storyteller and listener health over time. Consequently, the results extend our understanding of the EWP (Frattaroli, 2006; Pennebaker & Beal, 1999) by taking a communicative approach to assessing the degree to which health is improved over time for tellers in treatment versus control conditions. Additionally, conclusions from this study provide insight into the consequences of listening, or providing social support, to a relational partner's difficult life event. Future research should examine the content

(e.g., causal and insight words; Pennebaker, Mayne, & Francis, 1999) and processes (i.e., observational ratings of tellers' and listeners' behaviors) of the interactions themselves to further understand changes in psychological health and perceptions of interpersonal communication among friends over time.

Acknowledgment

Footnotes

1. All statistical results available from authors upon request.

2. Because we were interested in friend pairs engaging in an interpersonal interaction that was typical of their friendship, we purposely did not refer to them as "teller" and "listener" in the participant instructions. The terms "teller" and "listener" oversimplify the complex, collaborative process of interpersonal communication (see Stewart, 2011). However, for ease of interpretation and presentation in the study, we use these simpler terms to refer to the participants who either told a story of difficulty (treatment teller) or told about the events of their day (control teller) and to the participants who were not assigned to tell a story of difficulty (treatment listener) or assigned to tell about the events of their day (control listener).

3. Full instructions available upon request.

4. Although mental health is significantly correlated with the other three dependent variables, the nonsignificant correlations between negative affect with positive affect and with satisfaction with life prompted the use of separate split-plot ANOVAs.

5. Satisfaction with life: within-subjects $F_{(4,168)} = .35$, $p = .85$; between-subjects $F_{(4,168)} = 1.15$, $p = .34$. Mental health: within-subjects $F_{(4,152)} = 1.35$, $p = .25$; between-subjects $F_{(4, 152)} = .51$, $p = .73$.

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