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ORIGINAL ARTICLE

How *Does* the Comforting Process Work? An Empirical Test of an Appraisal-Based Model of Comforting

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Burleson and Goldsmith's (1998) comforting model suggests an appraisal-based mechanism through which comforting messages can bring about a positive change in emotional states. This study is a first empirical test of three causal linkages implied by the appraisal-based comforting model. Participants (N = 258) talked about an upsetting event with a confederate trained to display low, moderate, or high levels of person centeredness and nonverbal immediacy. After the conversation, participants completed several scales. Latent composite structural equation modeling was used to examine the model, which showed that person-centered and immediate emotional support exerted a direct effect on emotional improvement. Above and beyond this direct effect, person-centered comfort also encouraged people to verbalize their thoughts and emotions. These verbalizations facilitated cognitive appraisals, which in turn exerted a strong direct effect on emotional improvement. Mediation analyses further suggested that verbalizations of positive emotion words in conjunction with reappraisals partially mediated the influence of person-centered comfort on emotional improvement.

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Emotional support can provide tremendous physiological and emotional health benefits (Burleson & MacGeorge, 2002; Goldsmith, 2004). Because emotional support is primarily about alleviating upset, communication scholars have been concerned with identifying those message features that are most effective in causing emotional improvement. Two such message features, verbal person centeredness (PC) and nonverbal immediacy (NI), have consistently been found to be particularly beneficial in bringing about emotional change. *Person centeredness* captures the degree to which a helper validates the distressed person's feelings and encourages him or her to talk about the upsetting event (Applegate, 1980; Burleson, 1994). *Nonverbal immediacy* encompasses behaviors such as close proximity, forward lean, facial expressiveness, and gaze, which reflect interpersonal warmth (Andersen, 1985;

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Jones & Guerrero, 2001; Jones & Wirtz, in press). Extensive research shows that these two message features are viewed as sensitive, helpful, and beneficial when comforting a distraught person (Burleson & Samter, 1985; Jones & Guerrero, 2001).

But how does person-centered and nonverbally immediate emotional support actually make upset people feel better? What are the mechanisms through which these kinds of messages and behaviors effectuate emotional change? Burleson and Goldsmith (1998) recently theorized that the mechanism through which beneficial emotional support facilitates emotional change could be best captured via a sense-making process of the troubling event and its associated difficult emotions. The researchers conceptualized this sense-making process as a *cognitive reappraisal process* that is theoretically grounded in Lazarus and Folkman's (1984) stress and coping theory. Burleson and Goldsmith's conceptualizations have been frequently cited yet remain largely untested. The current study is a first empirical test of three causal linkages that are implied by the appraisal-based comforting model. The model tested here proposes that person-centered and immediate emotional support encourages distraught people to express thoughts and feelings about the upsetting event. These verbalizations subsequently facilitate cognitive reappraisals that then lead to emotional improvement.

Advances of the current study

If emotional improvement is the ultimate goal of emotional support and if the central mechanism through which such improvement occurs is cognitive reappraisal, then the primary goal of comforting ought to be to facilitate cognitive reappraisal in order to generate emotional improvement in the distressed person. This conceptual reformulation of the comforting process challenges what is currently assumed to be a *direct* and *immediate* effect of beneficial emotional support: emotional improvement. To be sure, emotional improvement is the ultimate comforting objective, and, in fact, distraught people often report feeling better as a direct outcome of having talked about the upsetting event (Caplan, Haslett, & Burleson, 2005; Jones, 2004; Pasupathi, 2003; Pennebaker, Zech, & Rimé, 2001). Nevertheless, the current model suggests that emotional improvement might not always be directly and immediately attainable because emotions require cognition (Clore, 1994). That is, in order for emotional change to occur, some form of cognitive processing is necessary (Frijda, 1993). Therefore, an appraisal-based model of comforting posits that emotional change is an indirect outcome that is caused by several intervening factors, such as verbalizations of thoughts and feelings, and cognitive reappraisals.

Pragmatically, then, the model tested here challenges conventional metaphorical expressions and reifications of comforting communication, which is frequently viewed as some form of antidote administered to a more or less passive patient in hopes that it will swiftly transform troublesome emotions into pleasant ones ("If only I could make him/her feel better!") (Burleson & Goldsmith, 1998). Of course, it is ultimately the distraught person who has to instigate the coping process,

but appraisal-based comforting suggests that emotional support is a gradual process that is *discursively constructed* both by the helper and the distressed person (Goldsmith, 2004).

Finally, the current study also advances the conceptual boundaries of stress and coping theory, which tends to focus primarily on cognitive and affective processes to the exclusion of nonverbal and verbal message dynamics. We advocate an interactive coping model that requires the active participation of a helper. Similarly, research that espouses the propitious effect of the "talking cure" tends to examine primarily the outcomes of sharing one's emotions without addressing the precise discursive mechanisms that lead to these outcomes (e.g., Pennebaker, Hughes, & O'Heeron, 1987). The appraisal-based comforting model proposes that person-centered and nonverbally immediate comfort is transactional in nature and provides a strategic discursive vehicle that lay helpers and professionals can use to facilitate stress disclosures, reappraisals, and ultimately emotional improvement.

Stress and coping theory in the context of comforting communication

Lazarus and Folkman's (1984) cognitive theory of stress and coping consists of two processes: cognitive appraisal and coping. At the heart of cognitive appraisal lies an assessment of what a specific event means to one's personal well-being (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 2000; Lazarus & Folkman). If the event is appraised a certain way, then a specific emotion associated with the appraisal will follow. Consequently, it is not the event itself that generates negative emotional states. Rather, it is how the event is *appraised* that causes emotional distress. This reasoning explains partially why people respond emotionally in different ways to similar events (Lazarus, 1999). Discrete emotional states are fixed universal responses to appraised situations that are distinguished on the basis of their core relational themes, their appraisal patterns, and their action tendencies (Lazarus & Folkman, 1984; Smith & Pope, 1992). *Core relational themes* represent general evaluations of person–environment dynamics and highlight the central threat, harm, or benefit of an event to one's personal well-being (Lazarus, 1991; Smith & Lazarus, 1993). Each emotion corresponds to a specific core relational theme. For example, the core relational theme of sadness invokes some irrevocable loss and a sense of uncontrollability (Ellsworth & Smith, 1988; Lazarus, 1991). Each emotion also possesses a unique appraisal pattern consisting of *primary appraisals* (i.e., the personal relevance of a stressful event) and *secondary appraisals* (i.e., individual coping options). Finally, *action tendencies* are biological urges to act and link emotion states to their subsequent physiological and behavioral response patterns (Burleson & Goldsmith, 1998; Lazarus, 1991).

Burleson and Goldsmith (1998) locate sense making of the upsetting event and emotional healing in the *coping process*, which "consists of cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141).

Considerable research suggests that coping is an important component in sustaining interpersonal relationships and personal well-being (e.g., Lyons, Mickelson, Sullivan, & Coyne, 1998; Winstead, Derlega, Lewis, Sanchez-Hucles, & Clarke, 1992). People commonly use two kinds of coping strategies: *problem-focused coping*, which involves action-centered cognitive and behavioral strategies directed at managing or altering the external demands of the upsetting event, and e*motion-focused coping*, which involves cognitive strategies that are directed at regulating emotional responses to the stressful event (Lazarus & Folkman).

One emotion-focused coping strategy that seems to be particularly effective in bringing about emotional change is *cognitive reappraisal* (Dunkel-Schetter, Folkman, & Lazarus, 1987; for a review, see Lazarus, 1999). The cognitive mechanism of reappraisal reflects the very nature of the initial appraisal process. To recap, difficult emotions result from events that were appraised initially as harmful to one's personal well-being. In order to bring about emotional change, coping efforts should not focus on changing the event itself but rather on how the event was initially evaluated in terms of its personal relevance to one's well-being. In the words of Burleson and Goldsmith (1998), "the only way to change a feeling state is to change what produced that feeling state in the first place: the appraisal of the distressed person" (p. 258). Consequently, beneficial comforting messages are those kinds of messages that assist the distraught person in making sense of what happened, understanding the causes of experienced difficult emotions, and reassessing the external circumstances in terms of their relevance to personal well-being.

The hypothesized model

Figure 1 features the hypothesized model tested in the current study. The model hypothesizes that emotional improvement can be a *direct* outcome of person-centered and immediate comfort (H1). As mentioned earlier, the simple retelling of emotional experiences is frequently experienced as cathartic (Breuer & Freud, 1895/1961) and might help people feel better more or less directly (Pasupathi, 2003; Pennebaker, Zech, et al., 2001). But the model also predicts that person-centered and immediate emotional support encourages people to verbalize their

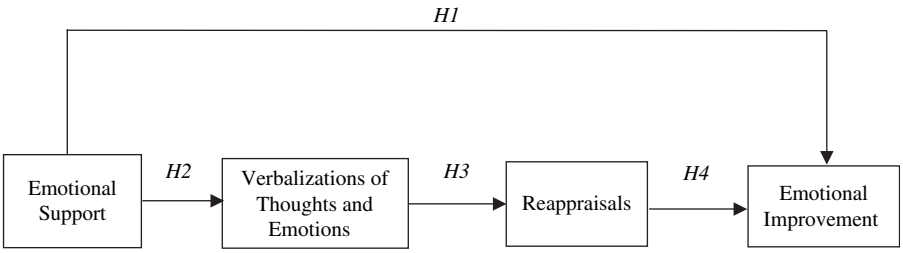

Figure 1 The conceptual model featuring the association between emotional support, verbalizations, reappraisals, and emotional improvement.

difficult emotions and troublesome thoughts (H2). These verbalizations subsequently encourage cognitive reappraisals (H3), which in turn facilitate emotional improvement (H4).

The second causal linkage hypothesizes that person-centered and immediate emotional support causes distraught persons to disclose their feelings and thoughts (H2). In order to encourage these kinds of disclosures, emotional support needs to fulfill two functions. First, it needs to generate a nurturing and caring environment within which the upset person feels safe to share thoughts and feelings. Person-centered comfort fulfills this function not only because it is nonjudgmental and face saving but because it also validates upsetting emotional experiences and expressions (Goldsmith, 1994). But immediacy behaviors, such as close proxemic distancing, forward lean, and direct body orientation, might be particularly important in generating a supportive environment because these behaviors are approach behaviors that demonstrate positive affect, liking, warmth, and conversational involvement (Andersen, 1985; Burgoon & Hale, 1988). These nonverbal cues also stimulate physiological arousal, and increased physiological arousal is important because the interpretation of the change in one's state of arousal is connected to the experience and interpretation of emotion (Frijda, 1993).

A second function of person-centered and immediate emotional support is to encourage upset people to *talk* about their disturbing thoughts and feelings. Undoubtedly, immediacy cues are beneficial because they serve to coordinate interaction and generate rapport (Jones & Wirtz, in press; Tickle-Degnen & Rosenthal, 1990), but person-centered messages might be particularly important in fulfilling this function. Consistent with research on personal coping (e.g., Smyth & Pennebaker, 1999), social support (e.g., Thoits, 1986), and clinical interventions (e.g., Greenberg, Rice, & Elliott, 1993), person-centered comforting messages foster the explicit verbalization of feelings (Burleson & Samter, 1985; Jones & Burleson, 1997). Conversational partners who use person-centered comforting messages encourage distraught persons to talk about the upsetting incident(s) by asking questions (e.g., "What happened?"). Understandably, upset persons may be addled and thus get off-topic, leave out details, or jump ahead in their story telling. However, highly person-centered helpers use pragmatic communication tools, such as paraphrasing and perception checking, to make sure that distraught people stay focused and that all details of the upsetting event are captured. Most important, though, highly person-centered helpers encourage distraught persons to elaborate explicitly on upsetting emotions (e.g., "How do you feel about the event now?") and to examine *why* these emotions are felt (e.g., "So, what about this event made you angry?"). Indeed, encouraging people to explore discursively the causes of their emotional experiences is a crucial component of appraisal-based comforting (Burleson & Goldsmith, 1998). By contrast, less person-centered messages tend to avoid the discussion of feelings, seek to divert attention from distressing feelings and the problematic situation, or attempt to "quick fix" the problem that is producing the emotional distress (e.g., "I wouldn't worry if I were you"). Consequently, less person-centered messages are

unlikely to encourage distraught persons to reappraise the pertinence of their emotional state to the disturbing event that caused that emotion in the first place.

The third causal linkage hypothesizes that verbalizations of thoughts and feelings lead distraught persons to reappraise the personal meaning of the event (H3). Extensive research suggests that emotional disclosures as well as disclosures that indicate some form of cognitive processing are particularly helpful in alleviating emotional distress (for a review, see Pennebaker, Zech, et al., 2001). Suppressing negative emotions and thoughts, on the other hand, can be deleterious to one's health (Richards & Gross, 2000; Watson & Pennebaker, 1989). Of course, disclosing difficult thoughts and emotions may not always be beneficial (Donnelly & Murray, 1991; Stroebe, Stroebe, Schut, Zech, & van den Bout, 2002), and some people might benefit from disclosure more than others (Smyth & Pennebaker, 1999). However, extensive research suggests that putting difficult events into words that connote emotion and cognitive processing promotes an awareness and assimilation of the traumatic emotions and leads to improved mental and physiological well-being (Caplan et al., 2005; Pasupathi, 2003; see also Young, 2004).

The last causal linkage hypothesizes that reappraisals cause emotional improvement (H4). Extensive empirical research supports this claim (for a review, see Lazarus, 1999). For instance, several studies found that reappraisals lead to changes in emotion from negative to positive (Dunkel-Schetter et al., 1987; Folkman & Lazarus, 1988). Specifically, Folkman and Lazarus found that several coping strategies—among them reappraisal—mediated emotional change. Research also suggests that reappraisal is an important predictor of several health-related outcomes, such as depression and stress (or lack thereof), as well as subjective health status (Ptacek, Smith, & Dodge, 1994).

In sum, the hypothesized model predicts a direct effect of person-centered and immediate emotional support on emotional improvement. However, the relationship between person-centered and immediate emotional support and emotional improvement might be partially mediated by verbalizations reflecting emotional and cognitive processing as well as cognitive reappraisals.

Method

Participants

Students ($N = 264$) from upper division communication classes at Arizona State University in the United States participated in this study for extra credit or research experience points. Five participants were eliminated from the study because they suspected that the other person was a confederate, and one participant withdrew from the study for religious reasons. Participants ranged in age from 18 to 49 years with an average age of 21.7 years ($SD = 3.86$). The majority of the sample consisted of White/European Americans ($n = 210$) but also included Mexican Americans, Latinos/as, or Hispanics ($n = 21$); Asian or Asian Americans ($n = 12$); and African Americans ($n = 7$). Eight participants belonged to other ethnic groups.

Procedures

Data for this study were collected as part of a larger research project. The experimental procedures required participants to identify in writing three upsetting events that they were comfortable talking about with a stranger and that had occurred within the past month. Participants assessed the level of emotional distress of the events with a single-item Likert-type scale that ranged from 1 (*very emotionally distressing*) to 7 (*not at all emotionally distressing*). The experimenter (the first author) selected the event that was evaluated as most distressing. The mean distress rating for the events that were selected for the conversation was 2.00 (SD = 1.22). Once the event was chosen, participants completed a set of scales that are not pertinent to the current study. Participants were then asked to talk about this event with the confederate in a 5-minute videotaped conversation. After the conversation, participants and confederates were separated, ostensibly for privacy purposes, and participants completed a final set of scales, including the reappraisal and emotional improvement scales.

The experiment utilized two female and two male confederates who were trained to enact each of nine possible combinations of person centeredness (PC: low, moderate, high) and nonverbal immediacy (NI: low, moderate, high). Over the course of the data collection, each confederate enacted each possible combination six times for a total of 54 interactions. Prior to each interaction, confederates drew a slip from an envelope to determine which condition they would enact. Confederates then enacted their randomly assigned comforting condition as soon as participants arrived at the test site and acted like participants throughout the entire session.

Manipulations of PC and NI

Prior to collecting data, confederates received 25 hours of intensive training over the course of 2 weeks in how to express low, moderate, or high levels of PC and NI. With respect to the *moderate* conditions, past research indicates that most people are moderately immediate in their everyday interactions with others (Burgoon, Stern, & Dillman, 1995) and use simple expressions of condolence as the most frequent forms of comforting messages. Therefore, confederates were told to act as they would in a typical interaction with a stranger and to use moderately PC messages in the form of expressions of condolence (e.g., "I'm sorry to hear that"). Confederates were also instructed to use statements that express mild interest and concern for the participant (e.g., "Geez, that sounds pretty bad") and to acknowledge the upsetting situation with content-oriented remarks (e.g., "It's too bad you broke up after being together for such a long time").

In *high* conditions, confederates were told to increase their verbal and nonverbal comforting expressions dramatically from what they would use in a typical interaction. In the high PC conditions, confederates were trained to focus their verbal attention on the emotions expressed by participants. For example, confederates were trained to use comforting statements that expressed empathy (e.g., "I understand. I feel so bad for you") and acceptance of the other's feelings (e.g., "I don't blame you

for feeling that way"). To facilitate reappraisals, confederates also encouraged participants to talk about their feelings (e.g., "Man, how are you feeling right now?"), asked clarifying questions about the upsetting event (e.g., "So he never talked with you in person?"), perception checked (e.g., "Are you mainly upset or disappointed?"), and tied specific emotions to certain aspects of the upsetting event (e.g., "What about the event made you feel angry?"). In the high NI conditions, confederates were instructed to demonstrate warmth and concern by leaning forward or moving closer to participants, orienting their body positions completely toward participants, increasing eye contact to approximately 80%–90% of the time, and by putting "lots of warmth" in their voices.

In the *low* conditions, confederates were instructed to decrease their verbal and nonverbal comforting behaviors markedly from what they would typically use in interactions with strangers. They were told to reduce eye contact to approximately 20%–30% of the time, avoid facial animation, lean back and away from the participant, increase their distance from the participant, display boredom, and appear distracted or tired during the conversation. Confederates were instructed to convey low PC in the form of statements that encouraged the distraught person to forget about her or his feelings (e.g., "I think you ought to get over it"), minimized his or her feelings (e.g., "I wouldn't worry about it"), or that explicitly blamed the participants for the problematic situation (e.g., "Well, you could have studied harder"). Confederates were also encouraged to switch the conversation to an unrelated topic or to begin talking about personal concerns (e.g., "Guess what happened to me?"). Tables 1 and 2 provide examples of high PC/NI and low PC/NI dialogues.

Coding and manipulation checks for PC and NI

Three coders assessed confederate PC and NI cues from 84% ($n = 216$) of the videotaped conversations. Two primary coders rated PC and NI levels for all 216 confederates, whereas the secondary coder rated PC cues for 118 confederates and NI cues of 98 confederates.

Person centeredness

The PC scale consisted of five 7-point semantic differential scales identifying fundamental features of PC (e.g., self-centered vs. other-centered, see Table 4). Interrater reliability (based on Ebel's intraclass r) was .95. The PC manipulation was analyzed with a 3 × 3 (PC: high, moderate, low × NI: high, moderate, low) analysis of variance (ANOVA), with coder ratings of PC as the dependent measure. The ANOVA detected a significant main effect for PC, $F(2, 207) = 696.04$, $p < .001$, $\eta^2 = .87$, and a follow-up contrast revealed a significant linear effect for PC, $F(1, 213) = 1416.41$, $p < .001$, $\eta^2 = .86$. As expected, confederates in the high PC condition were rated as most person-centered ($M = 6.36$, $SD = 1.11$), followed by confederates in the moderate condition ($M = 4.04$, $SD = .18$). Confederates in the low PC condition were rated lowest ($M = 1.28$, $SD = .83$).

Table 1 Excerpt From a High PC–High NI Dialogue With a Male Confederate and a Female Participant

P: My husband is into racing cars. He has an Acura, and he decided he wanted to take out the whole interior. The only thing that is left is the driver's seat. That is it. No paneling, no floor, the back seats are gone, cut the seatbelts, cut everything. And then he thinks that he needs performance parts to make the car go faster, and we don't really have any money because we've only been married for about a month. So, money is kind of tight.
C: And you don't support this whatsoever?
P: Well, I support his hobby but not when it ruins the car. We have to make a car payment on it every month. We just bought it, like, six months ago.
C: That would be frustrating.
P: It's really frustrating. He has done this before. He took everything out and I just cried, so he felt bad, and he put it back. But then once we got me a new car, he thought that since I have my own car, he can do whatever he wants to his car, even though it's ours. They're both our cars. And I told him that once he has driven it for a couple years, he can make that a total race car. Do whatever he wants to it, and he'll get a new car. And so then we'll have three, one for him, one for me, and then his racecar. And he can do whatever he wants to it. But once he figured out he's got a new car, he decided to take everything out. That's what I'm most frustrated about.
C: So do you feel like he is kind of just doing his own thing, not even caring for your feelings?
P: Exactly! And I even asked him about that, and he said "Well, you'll just get mad at me, so I figured if I don't ask you, I'll just do it." I just said "What!?" It is the only thing we fight about, and it is just so silly, you know.
C: So he thinks it's OK because you have your own car now?
P: Exactly! That's his rationale. "You have your own car. I can do whatever I want to my car."
C: And you've talked to him about this?
P: We talk about it all the time. He is like "What is done is done, we can't do anything about it. It is over. I can't put the seat back in, they're not going to go back in."
C: If that happened to me, I would feel like having no control over the situation. It sounds like you can't go back.
P: Exactly!
C: Is it a new car?
P: No, it's a 1992. So it is not a new car.
C: But you're still making payments?
P: Yeah, we've only had it for six months. I mean, that's three and a half years of a $177 payment.
C: Frustration is definitely ….
P: … the word that comes to mind?
C: … the thought that would come to me, yeah.
P: And he can't understand why I can't understand it or deal with it, and I can't understand why he can't see my point of view. He says he sees my point of view, yet he continues to, you know ….

(continued)

Table 1 *continued*

C: … Rip it apart?
P: … Do his thing. I mean it is all done. It's ripped apart. There's no turning back. And he is like "It is done."
C: How do you feel towards his racing ….
P: … Habit? When he does something like this, I hate it. I'm very resentful about his racing habit.
C: When it comes to your personal belongings, when he dismantles it? But the racing aspect itself? You don't have a problem with it?
P: Right. Because I'm proud when he does good, and he does really, really good when he has a very fast car. But I mean, when it comes at a price, and he works for a company that sells performance parts, so he gets a discount, he gets all excited. I mean, he has gotten a lot of free parts that are expensive and that would otherwise cost a lot of money, but on the other hand, I don't know ….
C: So you've talked to him about it? What are his feelings towards you, because I know, you're frustrated? I'm sure you've expressed that to him, but what are his feelings towards you? Does he express any regret?
P: Oh, no! I don't think he has any regrets. He wants to have a fast car. That's his dream. He has it now. I don't think he regrets doing it at all. He doesn't like seeing me upset or whatever, I know that. But it's just kind of his main hobby. He loves to do that. He's just "as soon as the whole situation blows over, you'll feel better."

Note: P = participant; C = confederate.

Nonverbal Immediacy

NI was coded with a modified version of Andersen, Andersen, and Jensen's (1979) NI instrument, which consisted of a stem that began with "To what extent is/does person A('s) …," followed by 10 immediacy cues (e.g., "sit close to person B," "animated," "establish eye contact with person B"). The immediacy cues were evaluated on Likert-type scales that ranged from 1 (*not at all*) to 5 (*very much*). Interrater reliability (based on Ebel's intraclass *r*) was .98. The NI manipulation was analyzed with a 3 × 3 (NI: high, moderate, low × PC: high, moderate, low) ANOVA, with coder ratings of NI as the dependent measure. As expected, the ANOVA yielded a significant main effect for NI, $F(2, 207) = 1906.03$, $p < .001$, $\eta^2 = .94$, and a follow-up contrast revealed a significant linear effect for NI, $F(1, 213) = 3548.75$, $p < .001$, $\eta^2 = .94$. Confederates in the high immediacy condition were rated as the most nonverbally immediate ($M = 6.65$, $SD = .23$), followed by those in the moderate immediacy condition ($M = 3.98$, $SD = .80$). Confederates in the low immediacy condition were rated as the least immediate ($M = 1.50$, $SD = .32$).

Verbalizations of thoughts and emotions

All videotaped conversations were transcribed by a professional transcription service. The second author and one undergraduate student then prepared the transcribed conversations for submission to the Linguistic Inquiry and Word Count (LIWC,

Table 2 Excerpt From a Low PC–Low NI Dialogue With a Female Confederate and a Male Participant

P: Okay, well basically my distressing moment or situation would be at my job. What's happening, I guess, is my supervisor. I haven't been at my job that long, probably for about four months. Ever since I started, he's really had a problem with me coming up to him and asking him questions about the job. He hasn't been in his position that long, probably a couple months more than I have, but every time I go up to him, it seems like I'm questioning him, questioning his ability about the job because I'm asking him questions about it. It's kind of frustrating.
C: Do you think maybe you're asking bad questions?
P: Um, no, they are just straight out questions about the job. And it's usually … he'll respond with what he thinks I should do about the situation. It's more, like you know, brushing me off and telling me how to figure it out for myself.
C: I wouldn't worry about it then.
P: Think so?
C: Pardon?
P: Do you believe so?
C: Yeah, I mean, it will probably blow over.
P: Well, he's done this with a lot of people. I mean, a couple even quit, so it's just not myself.
C: Well, then you shouldn't worry about that especially because you know it's not personal. It's not just you.
P: Yes, yeah, I understand but it's frustrating to go up to him.
C: Yeah. Well, it's probably gonna be fine. Are there other people?
P: Uh, yeah, but if he's there, I do have to approach him or it's going around his back.
C: Right. You couldn't just ask.
P: You can, but there are some times that I try to, but I do try to avoid talking to him.
C: Right.
P: So there's no problem with that.
C: Right.
P: But then I see him a couple days a week, which is why it's … it's a problem.
C: How long have the other people dealt with him before they quit?
P: Ah, someone was there three months. There are some people that were there before me and they quit. Two quit about the same time, about three months, but I don't know how long they were there. It wasn't much longer. I think their frustration is just like mine.
C: Why don't you guys talk with him about it? You don't think that would …?
P: I just don't feel like I'm in a position to do that. I have talked to people about it and maybe it will resolve itself. It's not the first time that anyone's really said anything about it either.
C: Yeah. It should all go away.
P: You're probably right.
C: So you are going to school at the same time then and working?
P: That is correct. Yeah.

(continued)

Table 2 *continued*

C: Yeah.
P: Yeah, It makes life a little more hectic.
C: Are you almost done?
P: Yeah, four more years and I will be done. The job, pay the bills, pay the rent ….
C: But it's not your career right?
P: No, no, this isn't my career ….
C: Right.
P: I'm not too worried about it, but ….
C: Yeah.
P: This is more of what I'm going to do. School and then ….
C: Yeah.
P: And after that we'll see what happens.
C: Yeah. I can't wait to get a real job.
P: How much longer do you have?
C: Until May. I'm graduating this year. Almost done, yeah. I'm excited. In a way I'm not excited; kind of scary.
P: Yeah.
C: Yeah.
P: Yeah, everyone keeps telling me I don't have to grow up but you know …
C: Yeah.
P: Look at me. I'm a grown up.
C: Yeah

Note: P = participant; C = confederate.

2001; Pennebaker, Francis, & Booth, 2001). The LIWC consists of a text processing module and a dictionary that contains 2,300 words and word stems that are organized into 74 word categories (e.g., negative emotion words, positive emotion words, cognitive process words, pronouns). Participant turns and confederate turns were separated and organized into individual text files. The current analysis focused on participant turns only.

The word categories that were used to examine participant turns included (a) negative emotion words (e.g., angry, sad, wrong), (b) positive emotion words (e.g., happy, joy), and (c) cognitive process words because these three word categories have been found to be particularly indicative of health improvement and emotional well-being (Pennebaker, Francis, et al., 2001).[1] Of the three word categories, cognitive process words comprised the largest word category and included words that indicate insight (e.g., realize, see), causation (e.g., because, why), acceptance (e.g., accept, finish), or tentativeness (e.g., maybe, possibly). Frequencies of word usage were used for each of the three LIWC variables instead of ratio scores (i.e., the total word count divided by the amount of words for a specific category and multiplied by 100) because ratio (or index) variables might lead to spurious results (see Cohen & Cohen, 1983, p. 74). The frequency counts were standardized to *z* scores prior to all analyses.

Reappraisals

Reappraisals were assessed with five Likert scales that ranged from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Scale items included (a) "My conversational partner made me think about the events I described during the conversation," (b) "I feel that I ought to re-evaluate the event now after the conversation," (c) "I don't really see the conversation in a different light after the conversation (reverse coded)," (d) "Talking with my conversational partner about the event helped me get my mind off it," and (e) "I understand the situation better now that I talked about it with my conversational partner" (see Table 4).

Emotional improvement

Participants reported the extent to which they experienced emotional change with three items on Likert scales that ranged from 1 (*very strongly disagree*) to 7 (*very strongly agree*). Scale items included (a) "I feel better after talking with my conversational partner," (b) "My conversational partner made me feel better about myself," and (c) "I feel more optimistic now that I have talked with my conversational partner" (Table 4).

Table 3 features the means, standard deviations, and zero-order correlations for the variables in the model. As expected, the two predictors (PC, NI) were neither significantly correlated with one another ($r = .03$) nor with reappraisal ($rs = .05$). Also as expected, the dependent measures were moderately to highly correlated with one another.

Results

Analysis plan and descriptive analyses

Latent composite structural equation modeling (SEM) was used to test the hypothesized model. This approach is preferred over a regression or observed variable SEM approach because it allows for the estimation of measurement error (Stephenson &

Table 3 Correlation Coefficients, Means, and Standard Deviations for the Variables in the Model ($N = 258$)

	M	1	2	3	4	5	6	7
1. Nonverbal immediacy	4.04	1.98						
2. Person centeredness	3.89	.03	2.04					
3. Positive emotion words	10.01	.14*	.19**	5.49				
4. Negative emotion words	10.22	.10	.28**	.31**	5.47			
5. Cognitive process words	47.57	.10	.22**	.51**	.41**	19.11		
6. Reappraisals	3.63	.05	.05	.13*	-.02	.02	1.04	
7. Affect improvement	4.13	.17**	.22**	.18**	.01	.11	.67**	1.24

Note: Standard deviations are shown in the diagonal. Means for positive emotion words, negative emotion words, and cognitive process words are based on raw scores.
* $p < .05$. ** $p < .001$.

Table 4 Standardized Factor Loadings for the Latent Constructs (N = 258)

Indicator	Factor Loading
PC (α = .98)	
Disregards versus acknowledges[a]	.99
Unconcerned versus concerned	.99
Invalidates versus validates	.99
Feeling/other-centered versus self-centered	.99
Judges versus empathizes	.96
NI (α = .97)	
Orients body toward person B[a]	.99
Sits close	.94
Is animated	.94
Leans forward	.91
Reappraisals (α = .77)	
I understand the situation better now that I talked about it with my conversational partner[a]	.79
Talking with my conversational partner about the event helped me get my mind off it	.62
I feel that I ought to reevaluate the event now after the conversation	.50
I don't really see the distressing situation in a different light after the conversation (R)	.50
Emotional improvement (α = .81)	
I feel more optimistic now that I have talked with my conversational partner[a]	.82
I feel better after talking with my conversational partner	.75
My conversational partner made me feel better about myself	.72

Note: Factor loadings are standardized regression weights. All factor loadings are significant at $p < .001$. R = reverse coded; α = Cronbach's α.
[a]Reference indicator.

Holbert, 2003). Both measurement and structural models were tested with AMOS 5.0 (Analysis of Moment Structure; Arbuckle, 2003). Model fit was assessed with fit indices recommended by Hu and Bentler (1995), and Quintana and Maxwell (1999). We assessed mediation with an SEM application of Baron and Kenny's (1986) causal steps approach (see Holmbeck, 1997). The magnitude of mediation effects was assessed with a bootstrap procedure.

Prior to the analyses, data were checked for normality. All variables were normally distributed with the skew ranging from .06 to .63, and the kurtosis ranging from −.02 to −1.96. Statistical power (with α = .05) to detect significant correlations was .99 for large (r = .50) and medium effect sizes (r = .30) and .36 for small effect sizes (r = .10).

Measurement model

Using confirmatory factor analysis, the measurement model estimated the extent to which the scale indicators loaded onto their respective latent variables (PC, NI, reappraisals, emotional improvement). Because the verbalization variables were observed, single-item frequency counts, they were not included in the measurement model. All latent constructs but no observed error variances were allowed to covery with one another. The latent emotional improvement variable was correlated significantly with the latent PC, NI, and reappraisal variables (rs = .18, .14, .90, respectively; all $ps < .001$); no other latent construct associations were significant ($rs < .02$, *ns*).

The initial measurement model generated poor fit, $\chi^2(103, N = 258) = 711.99$, $p < .001$, Comparative Fit Index (CFI) = .94, Nonnormed Fit Index (NNFI) = .93, Root Mean Square Error of Approximation (RMSEA) = .13 (90% confidence interval [CI]: .14, .16). Two modifications were made: First, post hoc modification indices indicated highly correlated NI error variances. However, added covariance paths among the NI error terms generated a singular (i.e., positive) covariance matrix for NI, thus preventing a proper solution and suggesting multicolinearity (Kline, 2001). To resolve this problem, we removed those NI items that featured highly intercorrelated error terms. This procedure resulted in a latent NI construct with four highly correlated and internally consistent NI indicators (i.e., body orientation, close proxemics, animation, forward lean; see Table 4). These items seem to be particularly characteristic for the provision of immediate emotional support among strangers (LePoire & Yoshimura, 1999).

Second, one reappraisal item loaded poorly onto its unique factor and was subsequently removed (i.e., "My conversational partner made me think about the events I described during the conversation," $\beta = .42$). Indeed, compared to the remaining appraisal items, which assessed the extent to which participants took some form of positive reappraisal actions to change their perspective toward the upsetting event (i.e., improved understanding, reevaluation, positive diversion), this item merely assessed whether participants had thought about the event. Therefore, it is possible that this item might either tap a different dimension or might not tap cognitive reappraisal at all.

The modified measurement model generated excellent fit, $\chi^2(101, N = 258) = 120.74$, $p = .088$, CFI = .99, NNFI = .99, RMSEA = .03 (CI: .00, .04). All factor loadings were positive and statistically significant ($p < .001$, see Table 4). As can be seen in Table 4, reliabilities for PC, NI, and emotional improvement were quite good (αs = .98, 97, .81, respectively). The internal consistencies for the reappraisal scale were somewhat low but nevertheless deemed acceptable (Cronbach's $\alpha = .77$). Taken together, the factor structure of the four variables was confirmed and the latent variables appear to have been adequately measured by their respective indicators.

Structural model

To construct the structural model, the PC, NI, reappraisal, and emotional improvement items were averaged into composite variables. Paths from the latent construct

to its composite were fixed to 1.0, whereas paths from the latent construct to the error variance of the composite were fixed to $1 - \alpha$ and multiplied by the variance of the composite (see Stephenson & Holbert, 2003). The second step reflects the proportion of variance in the observed variable that is attributable to measurement error. The initial model did not fit the data, $\chi^2(7, N = 258) = 110.92$, $p < .001$. Post hoc modification indexes suggested an improved fit by correlating the error terms of the three verbalization variables, suggesting common methods bias. The respecified model generated excellent fit and is featured in Figure 2, $\chi^2(4, N = 258) = 2.30$, $p = .68$, CFI = 1.00, NNFI = 1.02, RMSEA = .00 (CI: .00, .07). A more parsimonious model with all nonsignificant paths eliminated also generated excellent fit, $\chi^2(9, N = 258) = 11.06$, $p = .27$, CFI = .99, NNFI = .98, RMSEA = .03 (CI: .00, .08).

Testing for mediation

Figure 2 suggests potential mediating influences of positive emotion words and reappraisals on the relationship between PC and emotional improvement. Therefore, a final model was generated that contained only those variables involved in the mediation, $\chi^2(2, N = 258) = .166$, $p = .68$, CFI = 1.00, NNFI = 1.02, RMSEA = .00

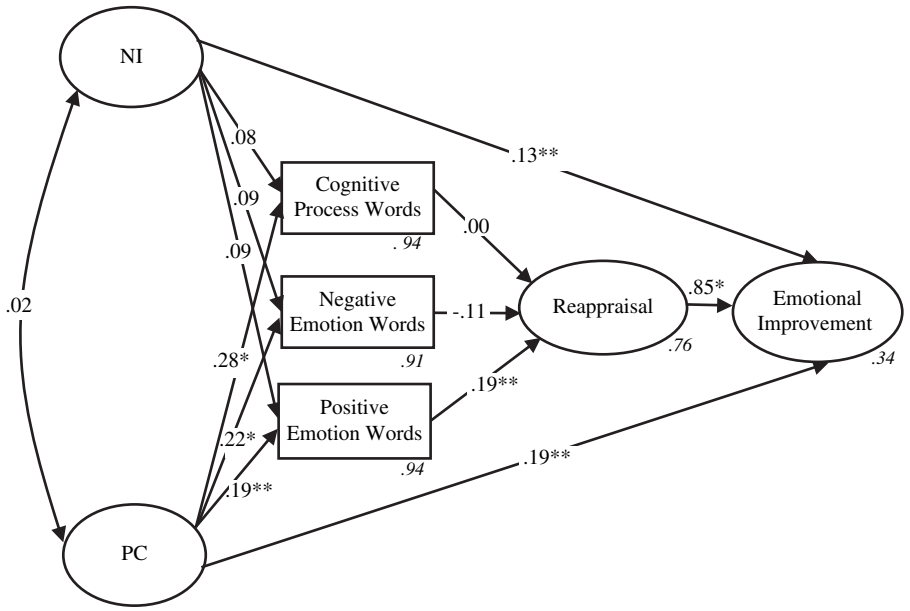

Figure 2 Path coefficients for the respecified model.

Note: PC = person centeredness, NI = nonverbal immediacy. Path coefficients are standardized regression coefficients. Though not indicated in the model, verbalization error residuals covary with one another (cognitive process words − negative emotion words = .34; cognitive process words − positive emotion words = .45; negative emotion words − positive emotion words = .26, all ps $< .001$). Values in italics are residuals. $^*p < .001$. $^{**}p < .01$.

(CI: .00, .12) (see Figure 3). Baron and Kenny's (1986) causal steps approach and a bootstrap procedure were used to test for mediation (Holmbeck, 1997). An SEM approach to Baron and Kenny's (1986) casual steps (see Holmbeck, 1997) and a bootstrap procedure (see Efron & Tibshirani, 1998) were used to test for mediation. Figure 3 showed significant direct effects of (a) PC on positive emotion words ($\beta = .19$, $p < .01$), (b) positive emotion words on reappraisals ($\beta = .17$, $p < .05$), and (c) reappraisals on emotional improvement ($\beta = .86$, $p. < .001$). The final step examined whether complete or partial mediation is warranted by testing the model under two conditions: when the PC–emotional improvement path is constrained to 0 and when it is not constrained to 0. Complete mediation is warranted if the model with the constrained path does not improve model fit (i.e., the direct PC–emotional improvement path is nonsignificant). The model containing the constrained path did *not* generate acceptable fit, $\chi^2(2, N = 258) = 15.04$, $p = .001$, CFI = .93, NNFI = .78, RMSEA = .16 (CI: .09, .24), thus suggesting only *partial mediation*. The direct effect of PC on emotional improvement decreased but did not turn to 0 (direct effect without mediators, $\beta = .22$, $p. < .001$; direct effect with mediators, $\beta = .18$, $p. < .01$).

Squared multiple correlations provide information about the variance accounted for by the complete set of variables that precede that specific variable and showed that 78.6% of the variance in emotional improvement was accounted for by PC, positive emotion words, and reappraisals. A bootstrap procedure (1,000 samples, $N = 258$) was used to generate 95% CI for the direct, total, and indirect effects of the variables in the mediation model and results are featured in Table 5 (Efron & Tibshirani, 1998; Preacher & Hayes, 2006). As can be seen in Table 5, a comparison of the *direct effect* ($\beta = .18$) with the *total effect* of PC on emotional improvement (sum of direct and indirect effects, $\beta = .21$) showed that 86.4% was accounted for by PC alone, with the remaining 13.6% being mediated by both positive emotion words and reappraisals. Further, as predicted, person-centered comfort did not exert a direct influence on reappraisals ($\beta = .03$, $p =. 62$), nor did positive emotion words exert a direct influence on emotional improvement ($\beta = .06$, $p = .19$). Thus, no

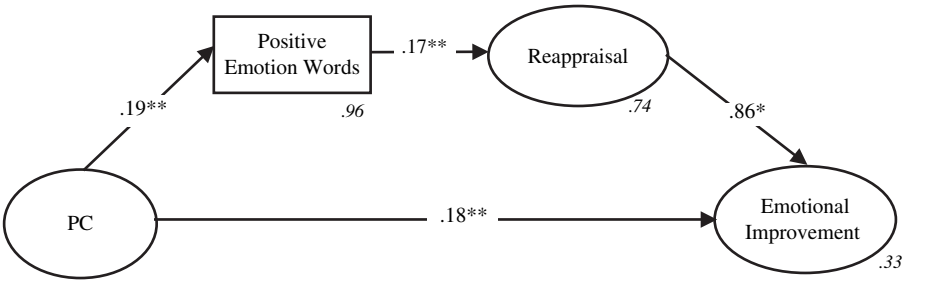

Figure 3 Path coefficients for the mediation model.

PC = person centeredness. Path coefficients are standardized regression coefficients. Values in italics are residuals. $^{*}p < .001$. $^{**}p < .01$.

further decomposition was warranted (for decomposing effects, see Brown, 1997). Finally, as can be seen in Table 5, the indirect effect of PC on emotional improvement was significant ($\beta = .03$, $B = .02$, $p < .01$), and the 95% CI for the nonstandardized indirect effect ranged from .004 to .041. Thus, positive emotion words and reappraisals exerted a relatively small mediating influence on the relationship between PC and emotional improvement.

Discussion

This study examined how person-centered and immediate emotional support alleviates emotional distress. Burleson and Goldsmith's (1998) appraisal-based comforting model served as the impetus for this study. The model tested here was predicated on the assumption that emotional improvement is not only directly shaped by person-centered and immediate emotional support but is also indirectly influenced by verbalizations and cognitive reappraisals.

The path analysis showed that NI and PC exerted a direct effect on emotional improvement. Person-centered emotional support also caused distraught persons to use an increased amount of positive and negative emotion words, as well as cognitive process words. Yet, only verbalizations of positive emotion words predicted reappraisals, although the path coefficient was relatively weak. Reappraisals, in turn, strongly predicted emotional improvement. Finally, the mediation analysis showed

Table 5 Direct, Total, and Indirect Effects of the Variables in the Mediation Model

	Person Centeredness	Positive Emotion Words	Reappraisals
Direct effects			
Positive emotion words	.51/.19 (.205, .822)		
Reappraisals		.03/.17 (.006, .051)	
Emotional improvement	.11/.18 (.059, .157)		1.22/.86 (.468, 4.007)
Total effects			
Positive emotion words	.51/.19 (.205, .822)		
Reappraisals	.01/.03 (.003, .035)	.03/.17 (.006, .051)	
Emotional improvement	.12/.21 (.074, .179)	.03/.15 (.008, .058)	1.22/.86 (.468, 4.007)
Total indirect effects			
Reappraisals	.01/.03 (.003, .035)		
Emotional improvement	.02/.03 (.004, .041)	.03/.15 (.008, .058)	

Note: The first value is the nonstandardized effect. The second value is the standardized effect. Values in parentheses are the 95% confidence intervals for the nonstandardized effects. $p < .01$ for all effects.

that even though the variance in emotional improvement was explained primarily by the direct effect of PC, verbalizations of positive emotion words in conjunction with reappraisals partially mediated the influence of person-centered comfort on emotional improvement to a small but significant degree.

The role of NI in appraisal-based comforting

Nonverbally immediate comfort exerted only a direct effect on emotional improvement (H1). This result makes sense because in the context of emotional support, NI cues primarily serve as the calming contextual cushion on which distraught people can rest and organize their thoughts and emotions. Close proximity, forward lean, body orientation, and animation were particularly indicative of immediacy. Immediate helpers who used these approach behaviors might have made distraught persons feel better because these cues not only convey conversational involvement (Coker & Burgoon, 1987; Hale & Burgoon, 1984) but also concern, interest, and liking (Jones, 2004; Jones & Guerrero, 2001). It is important to remember that experimental procedures used in the present study required *strangers* to engage in brief interactions, and therefore, the effects of the four immediacy cues may be limited to such interactions. It is possible that other immediacy cues may be more influential (i.e., impact emotional change) in other relational circumstances (e.g., when helper and recipient know each other) (LePoire & Yoshimura, 1999).

The role of PC in appraisal-based comforting

Verbalizations of Emotions and Thoughts

Above and beyond its direct effect on emotional improvement (H1), person-centered comfort caused distraught people to use an increased amount of verbalizations that connote positive and negative affect, as well as cognitive processing (H2). To put these results into context, it might be helpful to examine briefly an actual experimental dialogue. Consider the dialogue in Table 1 between a distraught participant and male confederate displaying high person-centered, immediate emotional support. Note that the confederate helper used message devices such as *clarifying questions* about the upsetting event ("So he thinks it's OK because you have your own car now?") and the distraught person's feelings ("How do you feel towards his racing …?"). He also *empathized* and *contextualized feelings* ("If that happened to me, I would feel like having no control over the situation. It sounds like you can't go back."). Note further that the distraught person and the helper *coordinated their talk* by completing each other's sentences, an indication that both interactants were "in sync" with one another's thoughts and feelings (Jones & Wirtz, in press; Tickle-Degnen & Rosenthal, 1990). Finally, the helper aimed at assisting the distraught person to *understand* and *differentiate* emotions and thoughts concerning the upsetting event ("But the racing aspect itself …? You don't have a problem with it?").

Compare this to the dialogue in Table 2 involving a distraught participant and a nonperson-centered, nonimmediate confederate helper. Here, the confederate did

not engage in *active listening* ("Pardon?") and also *refrained* from asking questions that might have encouraged the distraught person to elaborate on his feelings about what happened. Instead, the helper proceeded to *minimize* the upset participant's feelings on several occasions (e.g., "I wouldn't worry about it then"). Despite these minimizations, the distraught participant kept voicing his need to disclose his feelings ("Yes, yeah, I understand but it's frustrating to go up to him"). What is all the more dramatic is that in the end, the distraught person conceded that the problem was probably unimportant. Sadly, filled pauses dominate the latter part of the conversation, which seems to "fizzle out" for apparent reasons: If there is nothing to worry about, then there really is nothing to talk about.

These dialogues illustrate the impact of person-centered emotional support. Highly person-centered comfort encourages the explicit elicitation of emotions and thoughts, whereas low person-centered comfort tends to suppress these kinds of disclosures. The second dialogue also shows that low person-centered comfort might even suppress *all* talk, leaving both helper and recipient in an awkward silence and at an uncomfortable distance. This might cause the distraught person to feel even worse. Notably, the study is among the first to demonstrate the *behavioral* outcome of one important function of person-centered comfort: the verbalization of emotions and thoughts. Past research (e.g., Burleson & Samter, 1985; Jones & Burleson, 1997; Kunkel & Burleson, 1999) has advanced claims that person-centered comfort allows distraught persons to articulate their feelings. However, the present study is the first to demonstrate that experimental manipulations of person-centered comfort actually *do* encourage (or inhibit) upset people to disclose and share their feelings and thoughts, even in stranger interactions (see also Pennebaker, Zech, et al., 2001).

Reappraisals and emotional improvement

Expressions of positive emotion words by distraught persons also facilitated cognitive reappraisal of the disruptive event (H3), which in turn made upset people feel better (H4). Interestingly, only positive emotion words generated reappraisals, a finding that resonates with the results of Pennebaker and colleagues, who tested two emotion models of disclosure that lead to improved health. The first model, the *differential emotions model*, assumed that the use of more negative emotion words and fewer positive emotion words would predict health improvements, whereas the *summed emotions model* assumed that positive emotion words would be better health predictors. In a series of studies, these researchers found support for the summed emotions model (Pennebaker & Francis, 1996; Pennebaker, Mayne, & Francis, 1997; for a review, see Pennebaker, Mehl, & Niederhoffer, 2003). The results of the current study provide further support to the summed emotions model.

But an important question remains: Why does the frequency with which positive emotion words are verbalized contribute to reappraisals? Consider once more the dialogue in Table 1. Toward the end of the conversation, the distraught person begins to discuss her feelings of pride toward her partner (e.g., "Because I'm proud when he does good …"), thus providing the impetus to think through what made

her mad about her partner's actions in the first place. This dialogue shows that language generates thought and imagery, and serves as the stimulus for emotional experiences and emotional change (Pennebaker, Zech, et al., 2001). Specific positive message characteristics of highly person-centered emotional support (e.g., validations and legitimizations of feelings, expressions of care and concern) may lead participants to have more positive thoughts about the upsetting situation. These positive thoughts, in turn, might lead to more functional and positive appraisals.

Pennebaker and Francis (1996) also found that distraught people tended to cope more effectively with upsetting events when they used insight words (e.g., realize, see) and causation words (e.g., because, why). Surprisingly, our study did not detect a causal relationship between cognitive process words and reappraisals. An alternative structural model that contained the insight word and causation word categories instead of the global cognitive process word category also revealed no direct effects for reappraisals (causation–reappraisal path, $\beta = .08$, $p = .14$; insight–reappraisal path, $\beta = .06$, $p = .29$). One reason for this null finding might be that the conversations were simply too short to allow distraught persons to search for and subsequently talk about the reasons for their stressful emotions. It is also possible that the effect of causal insight verbalizations on reappraisals takes some time to develop.

Mediating effects

As expected, the mediation analysis suggested partial mediation for positive emotion words and reappraisals in the relationship between PC and affective improvement, although the effect was relatively small. The direct effect of person-centered comfort on positive emotion words was relatively weak, as was the effect of these verbalizations on reappraisals. However, reappraisals strongly predicted affective improvement. Thus, we have to examine in detail *why* verbalizations of positive emotion words did not do a better job in mediating the relationship between PC and reappraisals. There may be several reasons for these weak mediating results, including measurement issues, procedural issues, and theoretical issues. Indeed, these issues highlight the limitations of the current study and point to important future research directions.

Limitations and future research directions

There are several measurement concerns. First, the measurement of reappraisal was somewhat limited in terms of its reliability and its validity. Clearly, reappraisals predicted affective improvement and did so quite strongly. Nevertheless, the scale was plagued by attenuated internal consistencies ($r = .77$), which reflects underlying validity problems. In terms of its content validity, it might be that the reappraisal scale did not fully represent the content domain of cognitive reappraisal. Conceptual definitions advanced by Lazarus and Folkman (1984) characterize reappraisal as a change in the way an encounter is construed. Consequently, scale items developed for the present study tapped dimensions, such as reevaluation (i.e., "I feel that I ought to re-evaluate the event now after the conversation," "I don't really see the distressing situation in a different light after the conversation"), a general understanding

of what happened (i.e., "I understand the situation better now that I talked about it with my conversational partner"), and cognitive diversion (i.e., "Talking with my conversational partner about the event helped me get my mind off it"). However, these dimensions are not commensurate with those tapped by Folkman and Lazarus's (1988) reappraisal scale, which targets domains, such as personal growth (e.g., "I changed or grew as a person in a good way"), prayer (e.g., "I prayed"), and life balance (e.g., "I rediscovered what is important in life"). Given these operational differences, the reappraisal scale used in the current study might have been lacking a desirable level of construct validity. Future research ought to carefully examine how to operationalize cognitive reappraisal.

A second measurement issue concerns the assessment of verbalizations. The correlated error variances of the three verbalization variables indicate possible conceptual overlap (e.g., method bias). The LIWC records emotion and cognitive process words in the form of word counts, but these word counts might not be the most valid assessments of emotions and thoughts experienced by the help recipient. As distraught people talk about thoughts and emotions, they might describe not only their own emotional experiences but also the emotional experiences of those involved in the upsetting event. That is, the LIWC does not discriminate among emotion words and their reference. The dialogue in Tables 1 illuminates this point. For example, the participant used several emotion words to describe the emotional state of her partner (e.g., Participant: "…, [he] gets all excited"). A related issue addresses emotion words used by the confederate helper that actually describe *the participant's* emotional experiences (e.g., Confederate: "[Frustration] is definitely …"; Participant: "… the word that comes to mind?"). Emotion words used by the confederate helper were not counted in the present study. Taken together, future research ought to examine appraisal differences in expressions of personal emotions and the emotions experienced by others involved in the upsetting incident. Future research also ought to examine carefully whether specific kinds of affective verbalizations differentially influence reappraisals.

Next, procedural issues may have also influenced the outcomes of the present study. The mediating effect of verbalizations and reappraisals on person-centered comfort and emotional change might have been attenuated because they were a result of the experimental procedure used in the present study. Notably, participants were asked to disclose painful personal experiences for academic reward in a brief, time-delimited, and videotaped interaction with a confederate stranger in an unfamiliar setting. This is hardly the type of setting any of us would choose to seek emotional support. In addition, participants completed the reappraisal and affective improvement measures immediately after the 5-minute conversation with the confederate helper. On the one hand, these shortcomings add to the practical significance of the results because it is not unreasonable to assume that "real-life" effects of appraisal-based comforting are even more powerful. On the other hand, we concede that the present study does not quite dodge its own critique of the "magic bullet" approach to emotional support. Person-centered emotional support is a discursive process that takes time, as does coming to grips with difficult thoughts and feelings, and it is not

uncommon that people who disclose difficult situations or emotions experience a change in emotional state hours or even days later (Donnelly & Murray, 1991). People might actually feel *worse* immediately after having disclosed an emotionally upsetting event (Donnelly & Murray; Murray & Segal, 1994). Future research will have to consider the long-term effects of verbalizations and reappraisals on the relationship between person-centered comfort and emotional improvement in more ecologically valid settings (e.g., established relationships).

Theoretical issues concern the relative extent to which emotional improvement is due to reappraisals that were generated by person-centered comfort versus the direct impact of PC. The mediation analysis showed that person-centered emotional support explained most of the variance in emotional improvement. That means that people reported feeling better *qua* having received person-centered emotional support. The most important function of person-centered comfort might well be to elicit reappraisals, but these kinds of support messages also perform several other functions: they convey liking and attention; they express warmth, care, and concern; and they provide reassurances about the present and the future (Burleson & MacGeorge, 2002). These latter contributions should not be mediated by verbalizations and reappraisals; indeed, they ought to be a direct function of person-centered comfort. Thus, future research needs to include assessments of these other mechanisms by which PC influences emotional improvement. Future research also ought to examine the relative importance of these functions in the emotional support process.

Finally, we make an observation concerning causality in SEM. Because the current study relied on an experimental method with random assignment in which PC and NI were manipulated, the direct effect of the experimental factors on the verbalization and emotional improvement variables can be interpreted fairly unambiguously (Bollen, 1989). That the directional chains tested here possess a strong theoretical foundation, namely cognitive appraisal theory, further adds to their plausibility. However, because verbalizations, reappraisals, and emotional improvement were measured variables, their causal relationship has to be interpreted with caution (Shrout & Bolger, 2002). Future research ought explore equivalent models of appraisal-based comforting.

Conclusions

For many years, psychotherapists have emphasized that people deal with trauma most effectively if they can talk about, understand, and assimilate their emotional upset (see "Mind and Body," 2003). The present study suggests that events per se do not produce emotions but only those events that are appraised as more or less relevant to one's personal well-being produce emotions. Consequently, negative emotions can only be changed if the event that produced the initial emotions is reappraised. This study provides a first test of a model that postulates how verbal and nonverbal emotional support can facilitate the cognitive reappraisal of upsetting emotions and thoughts. It also advances a potential discursive roadmap for lay and professional helpers to assist distraught persons in the coping process.

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Note

1 A supplemental analysis examined the influence of PC and NI on total word count. The two-way ANOVA confirmed that total word count was significantly influenced by PC and NI, $Fs(2, 241) = 19.94, 5.45$, $p < .001$, partial $\eta^2 = .14, .04$, respectively. Tukey-b follow-up tests ($p < .05$) showed that participants spoke significantly more in the high NI condition ($M = 710.91$, $SD = 217.57$) than in the low NI condition ($M = 611.61$, $SD = 177.70$). Participants also spoke more in the high and moderate PC conditions ($Ms = 726.97$ and 702.10, $SDs = 163.47, 210.56$, respectively) than in the low PC condition ($M = 554.82$, $SD = 181.72$). A second two-way ANOVA also confirmed that confederates talked *more* in the low PC condition ($M = 303.10$, $SD = 182.04$) than in high and moderate conditions ($Ms = 161.67, 136.00$, $SDs = 79.00, 89.22$, respectively), $F(2, 241) = 35.25$, $p < .001$, partial $\eta^2 = .25$.

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