‘I Know How You Feel’: Effects of Cognitive and Emotional Sharing of Negative Experiences in Online Support Groups

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Drs. Anika Batenburg (a.e.batenburg@vu.nl)
Dr. Enny Das

Theory

Online forum participation

Whereas ‘back in the old days’ individuals depended on experts and close relatives for health information, nowadays individuals are turning to the Internet to look for information about health-related issues (Rice, 2006). A rapidly increasing number of health-related support groups provide users with ample opportunities to share their personal stories online. Online support groups differ from professional health websites in their interactive, experience-based nature. Several studies examined the messages participants post online, suggesting the following motives for participating in online health forums: (1) exchanging information, (2) encountering emotional support, (3) finding recognition and understanding, (4) sharing experiences and helping others, and (5) amusement and creative expression (e.g., Fernsler & Manchester, 1997; Klemm, Reppert, & Visich, 1998; Sharf, 1997; Setoyama, Nakayama, & Yamazaki, 2009; Uden-Kraan, Drossaert, Taal, Seydel, & Laar, 2009). Studies also showed a positive relationship between forum use and users’ self-reported psychological wellbeing (e.g., decreased depression, loneliness, stress, stronger positive emotions) (Fernsler & Manchester, 1997; Gustafson et al., 1994; Klemm et al., 2003; McTavish, Gustafson, Owens, Wise, & Taylor, 1994; Uden-Kraan et al., 2009). Most studies are correlational. Only a few pre-posttest studies revealed that forum use had a positive effect on wellbeing compared to participants’ wellbeing before using the online forum (Lieberman et al., 2003; Winzelberg et al., 2003).

Although the essence of forum use lies in the exchange of health-related narratives online, no study to date has examined how the content of such online narratives relate to user motives and health outcomes. One exception comes from a survey study existing of three waves examined how insightful disclosure (e.g., writing about ones thoughts and feelings) within an online support group for women with breast cancer affected wellbeing. Using a word counting program this study showed that written insightful disclosure improved emotional wellbeing and reduced negative mood (Shaw, Hawkins, McTavish, Pingree, & Gustafson, 2006). So, it seems forum users’ wellbeing is related to their writing-style. Unfortunately, little is known about these underlying writing processes in online support groups. Moreover, no study focused on the influence of responses on these narratives from online peers.

Thus, as most studies focused on origins and possible consequences of forum use, little is known about the processes that bring about such positive changes, i.e., mediating factors. The present study tests the effects of two key elements in online forum use: (1) expressive writing and (2) responses from peers.

Expressive writing

More information regarding the beneficial effects of writing can be found in the expressive-writing literature, which generally examines the effects of writing in an offline setting. Expressive writing studies revealed that people benefit from emotional expression. In expressive writing experiments participants are asked to write about their deepest thoughts and feelings that have affected them and their life, in multiple...
sessions for 15-30 minutes (for the explicit assignment, see Pennebaker, 1997). Research has shown that such offline writing about emotional life events positively affects symptom reporting, psychological and physical health over time (e.g., Pennebaker, 1997; Pennebaker, 2000; Pennebaker & Beall, 1986; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Peterkin & Prettyman, 2009; Smyth, Stone, Hurewitz, & Kaell, 1999). So it seems that merely writing about a negative experience has a remarkable influence on physical and psychological wellbeing.

Two different theories exist regarding the psychological processes that elicit these positive outcomes. The first explanation points out that verbalizing an emotional memory can transform and reduce its emotional load. Zech (2000) found that almost 90% of the people have the view that talking about negative experiences is relieving. However, studies suggest that reactivating the memory of the experience increases the intensity of emotions, and a relieving-effect immediately after expression does not exist. Rimé, et al. (review, 1998) investigated this process by measuring (1) the initial intensity of the emotion (which was elicited by an experience), (2) the extent of social sharing afterwards, and (3) the intensity of the emotion elicited when the memory of the experience was reactivated later. Against their expectations, their data never supported any emotional recovery. Apparently, verbalizing itself is not sufficient for emotional recovery. Another line of reasoning suggests that writing forces people to cognitively reevaluate their life circumstances. These cognitive changes allow individuals to begin to think about and use their social worlds differently, and come to new solutions or acceptance. It helps people to get used or feel more comfortable with the feelings associated with a traumatic event, that allows cognitive reorganization, and eventually leads to a reduction of physical reactions related to inhibition or obsessive thinking (e.g., Pennebaker & Chung, 2007). These findings suggest that emotional expression is a catalyst, which starts the psychological process to eventually come to emotional recovery.

To reveal more insight into the underlying psychological mechanisms of writing, Lu and Stanton (2010) manipulated different writing styles. Respondents were randomly assigned to one of four writing conditions (20-min writing over 3 sessions): emotional disclosure, cognitive reappraisal, the combination of emotional disclosure (first session) and cognitive reappraisal (second and third session), or the control condition. Results revealed that cognitive reappraisal writing reduced physical symptoms, emotional disclosure buffered a decrease in positive affect over time, and the combination of emotional disclosure and cognitive reappraisal was most effective on both physical symptoms and positive affect. According to Lu and Stanton (2010) cognitive reappraisal is a critical factor in reducing the impact of stress and a mediator in the beneficial effects of expressive writing. By stimulating thinking about the stressor, promoting habituation and encouraging efforts to manage demands associated with the stressor, emotional disclosure is likely to facilitate cognitive reappraisal, but might not necessary lead to physical health benefits. Lu and Stanton (2010) suggest that the combination of emotional disclosure and cognitive reappraisal constitute a self-regulation process in which thoughts and emotions are regulated through reappraisal of stressors and the self. Since cognitive reappraisal could reduce the impact of stress and emotional disclosure is likely to facilitate cognitive reappraisal, but might not necessary lead to physical health benefits, it is hypothesized that (H1) emotional expressive writing triggers higher levels of negative emotions and symptom reporting, than cognitive reappraisal writing.

Responses from peers

Next to writing, an important element of online support groups is the fact that one receives responses from peers. This sharing element makes online support groups different from expressive writing in an offline setting. Research has shown that people have the tendency to share emotional experiences with others. After an emotion, people undertake sharing in 80-95% of the cases (e.g., Rimé, 2005; Rimé, et al., 1991a; Rimé, Noël, & Philippot, 1991b). According to Rimé regulation needs after an emotional upsetting event can be
categorized in three classes; socio-affective needs, cognitive needs, and action needs. The fulfillment of socio-affective needs (e.g., comforting, concrete social support, social integration, and esteem support) depends on the active contribution from the social environment. The second category includes cognitive needs (e.g., reorganization of motives, modification of schemas, re-creating of meaning and reframing), which open on a variety of cognitive tasks. Completing them allows the person to overcome perseveration of the impact of experience, such as mental rumination and intrusive thoughts. To fulfill these needs people are less dependent on others, although others could help in this process. The third category consists of action needs. Emotional experiences can damage facets of the person that were built up in previous experience and action (e.g., feelings of control, feelings of mastery, and self-esteem). As a result, emotional recovery requires the contribution of new experiences developed through concrete actions.

The opportunity to be in contact with others in the same condition could be helpful in getting patients through the psychological process of emotional recovery. Beyond the expression of thoughts and feelings, as in offline expressive writing, the connection to peers can boost the accomplishment of socio-affective needs and other patients can serve as role models to learn how to deal with difficult situations (Slater, 2002; Green, 2006). However, the responses or stories from online peers could also mismatch somebody’s needs. For instance, a patient who is recently diagnosed may be still in shock and is only looking for some understanding and recognition, while another forum user responds to provide concrete help and solutions about potential upcoming issues. In such a case, concrete help and solutions could come too soon, and be perceived as a mismatch to one’s needs. This study proposes that (H2) a mismatch of writing style and response has a negative effect on symptom reporting, emotions and mood. People written their story in the ‘emotional disclosure’ style have more need for socio-affective responses, and people written their story in a ‘cognitive reappraisal’ style have more need for cognitive reappraisal responses.

Method

Sample & Design

The hypotheses were tested in a 2 (Writing: cognitive reappraisal vs. emotional disclosure) x 3 (Response: cognitive reappraisal vs. socio-affective vs. no response) factorial design among 122 participants. Five respondents were deleted from the dataset because they did not understand the writing assignment.

Procedure & Measures

Half of the respondents received disclosure instructions focusing on emotional expression and the other half received instructions facilitating cognitive reappraisal (Lu & Stanton, 2010). The emotional disclosure group was instructed to write 15 minutes about ‘your deepest emotions about your current most stressful experience that has affected you and your life. Really let go and explore your feelings and thoughts about it’. Participants assigned to the cognitive reappraisal group were instructed to write 15 minutes about positive and negative consequences of a current most stressful event, their perceptions of the stressful event, challenges and opportunity arising from the event, cognitive reappraisal of their coping strategies (to prompt appraising the self as being resourceful and competent in dealing with stressor) and their positive thoughts about the stressors. After the writing assignment respondents had to answer some questions to reveal to what extent they overcome this trauma (e.g., ‘How often do you still think about the event?’, ‘Do you have the feeling you overcome this event?’, ‘How long ago did this happen to you?’), and some demographics (e.g., gender, age, marital status). Afterwards respondents randomly received a response on their story (purportedly from another anonymous participant), manipulated as a socio-affective response, a cognitive reappraisal response or no response at all (i.e., control group). Participants in the socio-affective response condition read the response: ‘Dear writer, thanks for telling me your story. I think it was an impressive story. It must have been intense to experience something like that. I experienced something quite similar, and I recognize a lot in your story. I understand how it must have felt and the impact it must have had on your life. Take care.’. Respondents in the
cognitive reappraisal response condition read: ‘Dear writer, thanks for telling me your story. I admire the way you dealt with this situation. Learning from these experiences is very important. Whenever you will experience something similar, you know better how to deal with it. I wish you good luck in the future.’.

Reading the response was followed by a questionnaire including items measuring emotion related symptoms (Cronbach’s α=.810) and emotions (Cronbach’s α=.828; Symptom/emotion checklist; Pennebaker, 1982) and mood (Cronbach’s α=.943; Verkorte POMS; Van der Ark, Marburger, Mellenbergh, Vorst & Wald, 2003). Respondents were also asked to fill in questionnaires that could indicate some important covariates, such as ‘need satisfaction in relationships’ in general (Cronbach’s α=.825; based on Basic Need Satisfaction in Relationships; La Guardia, Ryan, Couchman, & Deci, 2000), ‘perceived empathy’ in general (Cronbach’s α=.828; based on The Jefferson Scale of Patient’s Perceptions of Physician Empathy; Kane, Gotto, Mangione, West, & Hojat, 2007), and personality traits such as neuroticism (Cronbach’s α=.849) and extraversion (Cronbach’s α=.939; both based on EPQR-S; Eysenck, Eysenck & Barret, 1985). Finally, some control variables to measure the perceived match or mismatch of their story with the response (i.e., ‘was the reaction of the other person appropriate to your story?’) and if they could relate to the person who wrote the response (Cronbach’s α=.852; with exception of the control group; based on the relatedness part in the Autonomy, Competence, and Relatedness in Exercise scale; Vlahopoulos & Michailidou, 2006).

Results

Manipulation Check
No main effect of the response type (socio-affective vs. cognitive reappraisal) or an interaction effect of the assignment and response type on how they perceived the response was found. In both writing conditions, respondents perceived the two kinds of responses appropriate, soothing, and pleasant. The expected mismatch of writing style and response style was not found.

A marginally significant main effect of the response type on relatedness to the person who provided this response (F(1,75)=3.626, p=.061) was found. Respondents felt more related to the person who provided the socio-affective response, than the cognitive reappraisal response. The socio-affective response is marginally significantly perceived as more soothing than the cognitive reappraisal response (r=-.201, n=78, p=.078).

Emotions
One main effect of the assignment on emotions was found (H1). Respondents assigned to the cognitive reappraisal group experienced less negative emotions (M=1.78, SD=0.55) than respondents in emotional disclosure writing group (M=2.14, SD=0.88; F(1,116)=4.56, p=.035).

A significant interaction effect of assignment and response on emotions was observed, F(2,116)=3.45, p=.035 (H2). Post-hoc comparisons indicated that significant mean differences especially arose for respondents in the emotional disclosure condition. Respondents reported more negative emotions when they received a socio-affective response than cognitive reappraisal response (p=.007), and when they received no response compared to a cognitive reappraisal response (p=.039). No simple effects in the cognitive reappraisal assignment condition were found (Figure 1).

Symptoms
No main effects of assignment or response on symptoms were found. A significant interaction effect of assignment and response on symptoms was observed, F(2,116)=3.08, p=.050 (H2). Post-hoc comparisons indicated that significant mean differences especially arose for respondents in the emotional disclosure condition. Respondents in this condition reported significantly less symptoms after the cognitive reappraisal response than after the socio-affective response (p=.008) or no response (p=.070). No simple effects in the cognitive reappraisal assignment condition were found (Figure 1).
**Covariates**

All covariates showed a relationship with at least one of the wellbeing variables. Neuroticism had a negative relationship with wellbeing, and extraversion a positive relationship. The more people perceive empathy from others in general and the more they felt satisfied in their relationships in general, the better their wellbeing. The more often respondents think about the negative experience, the worse their wellbeing. Respondents who had more the feeling they overcome the trauma, had a better wellbeing. Subsequently, these covariates were added to the main model (the effect of writing assignment, response and the interaction of assignment and response on symptoms, mood and emotions) to reveal their influence. The results indicated that the interaction of assignment and response on the different wellbeing variables were still significant or became marginally significant, by checking for these covariates.

**Discussion**

In line with expectations, expressive writing about one's emotions regarding a negative life experience increased negative emotions, compared with cognitive reappraisal writing. However, contrary to expectations, mismatched responses increased, rather than decreased wellbeing in the emotional disclosure group. Specifically, receiving a cognitive reappraisal response, rather than a socio-affective response or no response, decreased negative emotions and symptom reporting in the emotional disclosure group and had no effects in the cognitive reappraisal group.

However, the expectation that the different writing assignments followed by different styles of responding would be perceived as a mismatch does not seem to exist. Respondents perceived both kinds of responses as appropriate, soothing and pleasant. Therefore, the effect of response and assignment on wellbeing does not seem to occur because of a mismatch, but the emotional state caused by the assignment and the influence of the response in this emotional state.

The positive effects of a cognitive reappraisal response in the emotional disclosure condition may be interpreted in several ways. First, a cognitive reappraisal response may have beneficial effects on wellbeing because it helps to interpret an emotional experience from a different viewpoint, thus providing a positive way out of negative emotions. Alternatively, a cognitive reappraisal response may suppress the emotions of the writer, and thus have negative effects on wellbeing in the longer run. There is some empirical evidence that expressing one's emotions elicits more emotions and a higher heart rate during writing, but promotes emotional recovery in the longer run (Low, Stanton & Danoff-Burg, 2006; Rimé, 1998). The comparison of short versus long-term effects of different writing styles and response types on psychological and psychical health constitutes an important agenda for future research.

The lack of observed differences between the no response and socio-affective response conditions suggest that a cognitive reappraisal response has the strongest direct impact in online writing groups. However, the effect of a socio-affective response on wellbeing seems to be influenced by the extent someone can relate to the person who provided the response, and how soothing they perceived this response. Respondents felt more related to the person who provided the socio-affective response, than the cognitive reappraisal response. Besides, the socio-affective response was perceived as more soothing than the cognitive reappraisal response. So remarkably, people experience this socio-affective response as more soothing and feel more related to the person who provided this response, but did not feel better compared to the control group (who did not receive any response). These results suggest that individuals, who are in this negative emotional state and feel related to the other person, appreciate their socio-affective response but it also validates their negative feelings.

Finally, the absence of response effects in the cognitive writing group suggest that cognitively reappraising a negative life experience makes individuals less vulnerable to information from the outside world. Cognitively reevaluating negative experiences not only makes individuals feel better about a situation, it also buffers ones susceptibility to responses. Cognitive reappraisal may thus promote resilience and a decreased dependency on others.
References


Figure 1. Results MANOVA: Means of symptoms, mood and emotions by response conditions

Emotional disclosure writing group

Cognitive reappraisal writing group