Emotional processing in an expressive writing task on trauma

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A B S T R A C T

Background: The current study examined expressive writing by investigating two aspects of emotional processing: depth of experiencing and order of emotional processing.
Materials and methods: A sample of 110 undergraduates, who suffered traumas, were instructed to write based on differing theories of emotional processing. Participant narratives were coded for depth of emotional processing and the presence of key emotions. To assess outcome, anxiety was measured at baseline and two weeks following writing.
Results: Depth of emotional processing differed as a function of condition and writing session. Moreover, a significant negative relationship was found between changes in the depth of emotional processing and anxiety symptoms (r = −.209, p < .05), such that an increase in experiencing corresponded to a decrease in overall anxiety.
Conclusion: The results suggest that writing instructions might differentially promote emotional processing over time and that promoting deepened emotional processing might facilitate reductions in anxiety.

1. Introduction

Estimates place the risk for individuals of experiencing a traumatic event within their lifetime at 65% [22]. Of those who experience a traumatic event, approximately 11.7% of women and 4% of men go on to develop post-traumatic stress disorder [PTSD, 11]. Beyond the DSM-V's criteria for PTSD, others have emphasized the existence of small "t" trauma resulting from experiences of rejection, embarrassment, or attachment difficulties [34]. Given the high lifetime prevalence of traumatic and distressing life events, expressive writing provides an easily accessible and administered intervention that is both time and cost-effective for treating both large and small "t" trauma. The purpose of this study is to examine *processes* that are surmised to contribute to expressive writing's reliable impact as an intervention for small and large trauma [2,37,41]; namely, a step-by-step model of emotion processing and depth of experiencing. Within the expressive writing framework, the former process has not been studied previously while the latter has received little attention. In this study, the step-by-step model will be compared to other processes, namely venting and meaning-making, with regards to the depth of emotional processing.

The original expressive writing task originated by Pennebaker and Beall [30] instructed individuals to write about their "deepest thoughts and feelings" related to a past or current traumatic experience over the course of three or more short sessions. Since the original study's findings on the benefits of expressive writing, many more studies have

demonstrated that expressive writing has a salutary effect on individuals experiencing a number of psychological and physical stressors [2]. In regards to trauma, expressive writing has well demonstrated as contributing to a decrease in the symptom severity of PTSD [17,32] among individuals who have experienced a traumatic stressor and an increase in PTSD-related growth among individuals meeting the DSM-IV-TR criteria for a PTSD diagnosis [37]. However, insufficient attention has been given to why expressive writing results in such gains [36].

1.1. Emotional processing

Emotional processing, in its broadest sense [8], has received the most research attention and theoretical development as an explanation for the successful results of expressive writing. From the humanistic-experiential perspective at least two constructs have been suggested as forms of emotional processing. The first is the "depth" with which people experience aspects of their narratives [7]. The second is sequential patterns of emotion that seem to be related to progression toward resolving distress [28]. Indeed, emotion-focused therapy, a therapy approach that emphasizes the depth of experiencing and transforming maladaptive emotions to more adaptive emotions, has shown to be effective for the treatment of PTSD [9,10,12,19] as well as anxiety disorders [5,42,43]. Other processes that have been explored include habituation and meaning-making.

1.1.1. Depth of experiencing

One conceptualization of experiential emotional processing is the depth of experiencing [7]. A client's level of experiencing in psychotherapy refers to the degree to which clients engage with and explore their feelings and meaning related to personal distress where certain kinds of processing are considered deeper and more meaningful than others [13]. In the context of experiential psychotherapy, changes in client experiencing have been shown to be predictive of overall treatment outcomes [8].

While the depth of experiencing has an established tradition in psychotherapy, there are only a few isolated examples of this being explored in the expressive writing paradigm [21,24]. In their study, Mundorf and Paivio [21] examined narratives written by adult victims of childhood abuse who underwent 16 to 20 treatment sessions of emotion-focused therapy for complex trauma. When the narratives from before and after treatment were compared, the depth of experiencing that participants used was shown to have increased significantly. Although not expressly measuring the depth of experiencing, research has shown that experiential avoidance, the opposite of engaging, is likely to increase posttraumatic stress symptoms [20,33,44]. This demonstrates the utility of using the depth of experiencing to understand the mechanisms that make expressive writing beneficial.

1.1.2. Sequential emotional processing

Based on more recent theory from emotion-focused therapy, a step-by-step model of emotion processing whereby client emotional distress is resolved has been developed [28; see Fig. 1]. In this model, clients move through a sequence of different affective and meaning states, which facilitate the resolution of personal distress. The process model follows four major developments in terms of emotional processing. During the first step, all clients begin by expressing global distress, characterized by high arousal and very low meaning as to the nature of their distress. In the second step, clients move to early expressions of distress, in which they start to articulate their concern in general terms and progress to somewhat more differentiated states (i.e., rejecting anger, fear, and shame). Third, clients move from those early expressions of distress by articulating the nature of their negative self-evaluations and their unmet existential needs. In the fourth step, successful clients eventually navigate to highly differentiated states of advanced meaning-making (i.e., assertive anger, grief, or self-soothing), which entails some positive evaluation of the self. Then, in a final step, clients complete the process and experience of resolution. This model

stipulates that not only is each step vital but that the order in which they are experienced leads to greater depth of emotional processing. The experience of any step without the others is theorized to be insufficient to experience optimal emotional processing and consequently, which will reduce the depth of experiencing and, consequently, lead to a less beneficial outcome.

Singh [35] confirmed the emotional processing model's utility in predicting good within-session outcomes among clients. In his study, Singh demonstrated that advanced client emotional states (i.e., assertive anger, grief, self-soothing) mediated the relationship between a therapist's experiential focus and the outcome of a client's within-session event. Singh's findings suggest that this type of emotional processing may also be applicable as a causal mechanism that contributes to psychological change among expressive writers. Several others studies have demonstrated the utility of various aspects of the step-by-step model [1,14–16,27].

The step-by-step model of emotional processing has some similarities to the processes of venting and meaning-making (section 1.1.3 and 1.1.4 respectively). Within the step-by-step model of emotional processing, engaging in the first two steps are similar to the methods of venting as both focus on the emotions that are undifferentiated with little meaning. The fourth step of advanced meaning-making is highly similar to that of meaning-making proposed by cognitive theory. The difference between these three processes is that the sequential processing model incorporates both aspects of venting as well as meaning-making along with the identification of needs and stipulates an order of experiencing.

1.1.3. Exposure, habituation, and venting

In general, repeated exposure is believed to be successful as a form of emotional processing because it repeatedly subjects individuals to a feared stimulus, which allows them to see that the characteristics of the stimulus that they fear are actually incongruent or at least disproportionate with the stimulus [6]. Exposure and habituation can often be thought of in terms of "venting" because it represents the repeated venting of one's relatively undifferentiated emotions. There is evidence to suggest that expressive writing facilitates an increase in physiological arousal during the first writing session followed by decreased physiological arousal in subsequent writing sessions, characteristic of habituation, in addition to a reduction in psychological symptoms [36]. A similar pattern of increased negative affect within the writing sessions with an overall linear decrease in negative affect across writing sessions
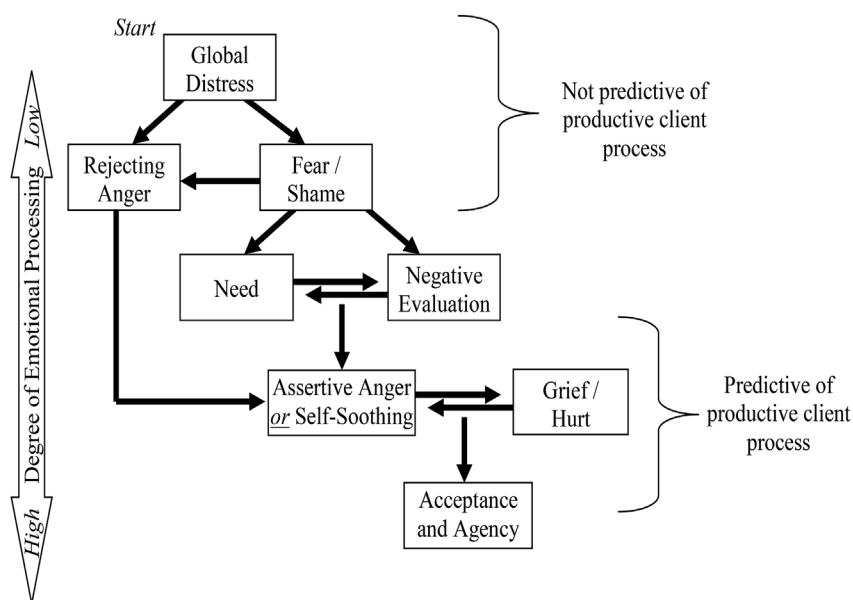

Fig. 1. Model of emotional transformations, modified from Pascual-Leone & Greenberg [28]; with permission.
Note. The figure indicates that the top part of the model represents emotions that did not discriminate between successful and unsuccessful emotional processing (i.e., *early expressions of emotional distress*) whereas emotions in the bottom part of the model did (i.e., *advanced meaning-making states*).