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Understanding Contributors to Effects of Emotional Reflection and Expression: The Roles of Psychological Distancing, Universality, and Generativity

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Understanding Contributors to Effects of Emotional Reflection and Expression: The Roles of Psychological Distancing, Universality, and Generativity

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Psychology

by

Brittany Leigh Drake

2023

ABSTRACT OF THE DISSERTATION

Understanding Contributors to Effects of Emotional Reflection and Expression:

The Roles of Psychological Distancing, Universality, and Generativity

by

Brittany Leigh Drake

Doctor of Philosophy in Psychology

University of California, Los Angeles, 2023

Professor Annette Louise Stanton, Chair

The human experience is marked by emotion. Particularly with regard to distressing emotions, a commonly endorsed belief in the lay public and some clinical circles is that reflecting on and disclosing one's emotions will reduce reactivity and buffer negative impact (McDaniel et al., 1981; Papageorgiou & Wells, 2001; Scheff, 2007; Wilson & Gilbert, 2008). However, findings from studies examining the effects of emotional reflection and expression on psychological and physical well-being are mixed. Although some research indicates that analyzing and verbalizing one's emotions facilitates adaptive coping and psychological adjustment (e.g., Martin & Tesser, 1996; Pennebaker & Graybeal, 2001; Smyth, 1998; Stanton & Low, 2012; Wilson & Gilbert, 2008), other findings suggest that examining and expressing one's emotions engenders rumination, ultimately intensifying negative affect (Mor & Winquist, 2002; Nolen-Hoeksema et al., 2008; Smith & Alloy, 2009).

The present research aims to investigate the conditions that facilitate adaptive emotional reflection and expression among individuals facing profoundly challenging stressors. Three interrelated studies explore the constructs of psychological distance (i.e., adopting a less personal perspective of one's experiences), universality (i.e., viewing one's experiences as shared by other people), and generativity (i.e., using one's experiences to benefit others) as factors hypothesized to facilitate adaptive emotional reflection and expression with regard to psychological and physical well-being. Study 1 examined linguistic indicators of psychological distance in expressive writing essays as a predictor of subsequent depressive symptoms in a sample of women diagnosed with metastatic breast cancer ($N = 31$). Study 2 was an experimental study that built on Study 1 to examine perceptions of psychological distance and universality in expressive writing essays altered to include linguistic indicators of psychological distance, and potentially universality ($N = 171$). Study 3 explored the influence of the social context surrounding emotional expression on adjustment using an experimental design. Specifically, an expressive helping intervention designed to facilitate emotional processing, psychological distance, a sense of universality, and generativity was compared to traditional expressive writing and a fact-writing control condition in a sample of bereaved young adults ($N = 178$).

Results from Study 1 indicated that linguistic indices of psychological distance significantly predicted declines in depressive symptoms 3 months after expressive disclosure, accounting for 24% of the variance in depressive symptoms. Findings from Study 2 demonstrated that participants who read essays altered to include linguistic indicators of psychological distance from Study 1 evidenced significantly greater perceptions of the essay author's psychological distance and universality compared to participants who read the unaltered essays. Results from Study 3 revealed that participants in the expressive helping condition

exhibited significant improvements in the primary outcomes of well-being and grief-related distress 2 months after engaging in the intervention relative to participants in the traditional expressive disclosure and fact-writing control conditions. In addition, findings supported the mediating roles of psychological distance, universality, and generativity in these observed improvements. Collectively, these studies demonstrate that psychological distance, universality, and generativity are important factors that can aid in facilitating adaptive emotional reflection and expression, especially in the context of severe stressors.

The dissertation of Brittany Leigh Drake is approved.

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2023

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2016	Phi Kappa Phi "Love of Learning" Award
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2013	University of Michigan James B. Angell Scholar Award
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SELECTED PUBLICATIONS

Gainsburg, I., Sowden, W. J., **Drake, B.,** Herold, W., & Kross, E. (2022). Distanced self-talk increases rational self-interest. *Scientific Reports*, *12*(1), 1-8.

Drake, B., Wilkins, S., Black, T., & McFarr, L. (2021). Coping with COVID-19: Implications for anxiety, depression, and well-being. *Harbor UCLA Scientific Sessions on Mental Health, 9*(1), 6–8.

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SELECTED PRESENTATIONS

Drake, B., Evers, S., Gilmore, K. A., & Granato, H. (2021, November 2-5*). Secondary traumatic stress and post traumatic growth among mental health practitioners during the COVID-19 pandemic* [Poster presentation]. Annual Meeting of The International Society for Traumatic Stress Studies, Virtual.

Drake, B., Wilkins, S., Black, T., & McFarr, L. (2021, April 5). *Coping with COVID-19: Implications for anxiety, depression, and well-being* [Poster presentation]. Ninth Annual Harbor-UCLA Scientific Session on Mental Health, Torrance, CA, United States.

Drake, B., Arkin, S., Babadjanian, A., Leonard, H., & McFarr, L. (2020, May 18). *Trajectory of shame in BPD throughout the course of dialectical behavioral therapy* [Poster presentation]. Eighth Annual Harbor-UCLA Scientific Session on Mental Health, Torrance, CA, United States.

Drake, B., Stanton, A., & Low, C. (2019, May 23-26). *Expressive disclosure in women with metastatic breast cancer: The role of psychological self-distancing* [Poster presentation]. Thirty-First Annual Association for Psychological Science Convention, Washington DC, United States.

Weissman, D.H., **Drake, B.,** Colella, K., & Samuel, D. (2017, November 9-12). *Perceptual load is not always a crucial determinant of early versus late selection* [Conference presentation]. Fifty-Eighth Annual Meeting of the Psychonomic Society, Vancouver, British Columbia, Canada.

Chapter 1: General Introduction

Emotions are a driving force in the human experience. Defined as "episodic, relatively short-term, biologically based patterns of perception, experience, physiology, action, and communication that occur in response to specific physical and social challenges and opportunities" (Keltner & Gross, 1999, p. 468) for the purposes of this dissertation, emotions provide helpful information and guide behavior (e.g., Ekman, 1992; Levenson, 1994). However, prolonged exposure to stressful circumstances (i.e., situations perceived as taxing or exceeding one's resources; Lazarus & Folkman, 1984) and concomitant negative emotions can threaten physical and psychological well-being (Thoits, 2010). Indeed, chronic stress has been linked to the development of several morbidities, including cardiovascular disease, cancer, diabetes, and major depression, and can contribute to the rapid progression of existing morbidities (Conley & Redeker, 2016; Dimsdale, 2008; Duijts, et al., 2003; McEwen, 1998; Van Praag, 2004).

Engaging in strategies to modulate emotional valence and intensity (i.e., emotion regulation) can benefit individuals experiencing chronic stress. Research has suggested that effective regulation of emotions, including emotional processing and expression, reappraisal, and other processes, facilitates the resolution of stress-induced psychopathology and can promote recovery from stress-related morbidities (Hayes & Feldman, 2004). Understanding which factors promote an individual's ability to regulate emotions in the presence of stressors is necessary to explain variability in the stress response, advance theoretical models of emotion regulation, and aid in determining whether emotion-regulation interventions should be tailored for specific populations.

Research has classified many emotion-regulation strategies (for a review, see Koole, 2009). The present research focuses on two general strategies: emotional self-reflection (i.e.,

privately reflecting on one's emotional experience) and emotional disclosure (i.e., expressing one's emotional experience to one or more people). An overarching aim of the present research is to examine the proposed qualities of effective emotional reflection and emotional disclosure surrounding profound stressors. Specifically, the present research aims to explore the constructs of psychological distance, universality, and generativity as factors hypothesized to facilitate adaptive emotional reflection and expression with regard to psychological and physical well-being.

Emotional Self-Reflection and Emotional Disclosure

Individuals often reflect on distressing emotions with the assumption that developing an understanding of their emotions will ameliorate them (Papageorgiou & Wells, 2001; Wilson & Gilbert, 2008; Scheff, 2007). However, research examining the effects of emotional reflection on subsequent well-being has yielded mixed findings (e.g., Bushman, 2002; Nolen-Hoeksema et al., 2008; Ochsner & Gross, 2008; Wilson & Gilbert, 2008). Some results suggest that analyzing (and verbalizing) one's emotions promotes effective psychological adjustment (e.g., Martin & Tesser, 1996; Pennebaker & Graybeal, 2001; Smyth, 1998; Stanton & Low, 2012; Wilson & Gilbert, 2008). On the other hand, findings from another body of literature suggest that examining (and expressing) one's feelings can engender unhelpful thought processes such as rumination, ultimately intensifying negative affect (Mor & Winquist, 2002; Nolen-Hoeksema et al., 2008; Smith & Alloy, 2009).

Research regarding the consequences of emotional expression in the context of stressful experiences largely echoes the mixed findings of self-reflection research (Greenberg, 2002; Greenberg & Paivio, 1997; Kennedy-Moore & Watson, 1999). Empirical evidence has demonstrated that emotional expression can intensify distress (Laird, 1974) and impede problem-

focused coping efforts (Nolen-Hoeksema, 1991). Additionally, when negative emotions are habitually or impulsively expressed, interpersonal relationships can suffer (Tavris, 1984). At the same time, stressor-related emotional expression can also help to dissipate distress (Stanton et al., 1994; Stanton, et al., 2000), minimize intrusive thoughts (Horowitz, 1986), and promote fear extinction during exposure therapy (Kircanski et al., 2012). However, owing to heterogeneous methodologies for measuring and manipulating emotional expression, diverse outcome variables, and failure to measure potential mediating variables, additional research is warranted to elucidate the qualities of and conditions under which emotional expression is useful.

When are emotional self-reflection and emotional disclosure regarding prolonged stressful experiences effective in promoting psychological and physical health? A survey of the existing literature makes it evident that approaching prolonged stressful experiences and associated negative emotions is a more effective step toward achieving long-term psychological adjustment than avoidance of those experiences (e.g., Boelen et al, 2010; Morina, 2011; Kashdan et al, 2009; Salters-Pedneault et al., 2004; Stroebe et al., 2007). Indeed, a large body of research documents that although emotional avoidance can provide immediate reprieve from negative emotions, avoidance strategies such as suppression of negatively-valanced emotional experiences often backfire, resulting in preoccupation with negative experiences and emotions (Cribb et al., 2006; Foa & Kozak, 1986; Hayes et al., 1996, Moulds et al., 2007; Wegner et al., 1987). Moreover, the relief provided by avoidance strategies is often fleeting, as cognitive representations of valanced situations remain unchanged (Kross & Ayduk, 2008, 2017).

In contrast to avoidance-oriented strategies, researchers have suggested that effective adaptation to stressful experiences and negative emotions involves confronting negative experiences to alter cognitive representations. Emotional processing has been proposed as an

essential component of adaptive emotional reflection and expression about negatively-valenced events (Foa, & Kozak, 1986). Drawing from the cognitive psychology literature, theorists suggest that emotional processing occurs when individuals attribute new meaning to emotionally distressing content (Greenberg & Pascual-Leone, 1997; Samoilov & Goldfried, 2000). New meaning attributions are then thought to encourage reappraisal of emotionally painful material reflecting reduced threat, resulting in less emotional distress (Burleson & Goldsmith, 1996). Indeed, the process of altering cognitive representations of traumatic or stressful experiences through the generation of personally relevant meaning has been highlighted in the literature as a critical pathway to resilience and psychological growth (Davis et al., 1998; Janoff-Bulman & Frantz, 1997; Park, 2010). Although the identification of emotional processing as a potential process that supports adaptation following stressful experiences represents a step toward conceptualizing the conditions that facilitate adaptive emotional reflection, this broad definition of emotional processing implicates further nuanced psychological processes. As such, additional research is warranted to examine the conditions that aid effective emotional processing and adaptation to stressful circumstances.

Pennebaker's Expressive Writing Paradigm

Expressive writing, one empirical approach to investigating emotional expression, was initially developed by Pennebaker and Beall (1986) in response to research demonstrating a relatively high rate of stress-related physical disease among individuals who had experienced traumatic events (see Pennebaker, 2018). The paradigm was designed to prompt emotional processing and expression among individuals who experienced traumatic or stressful circumstances to investigate their effects on physical and psychological health outcomes. Undergraduates were randomly assigned to one of four groups to write for 15 minutes on four

consecutive days about trivial topics (e.g., description of everyday objects; control condition) or about a personally traumatic experience emphasizing either: a) their deepest thoughts and feelings, b) the factual details, c) or both their feelings and facts about the experience (Pennebaker & Beall, 1986). Participants who wrote about their emotions and facts surrounding a traumatic experience visited the health center fewer times in the six months after writing than those who wrote about trivial topics. These findings offered preliminary evidence for the benefits of expressive disclosure following traumatic experiences.

Since the paradigm's development, expressive disclosure has been examined in hundreds of randomized studies using numerous methodological modifications and a variety of populations (e.g., Frattaroli, 2006; Gidron et al, 1996; Kliewer et al., 2011; Lepore, 1997; Lepore & Greenberg, 2002). Reviews and meta-analyses (Meads et al., 2003; Reinhold et al., 2018; Smyth, 1998) have demonstrated that, compared to control conditions, expressive disclosure often produces psychological and physical health benefits among diverse populations. Despite extensive research, the specific mechanisms of emotion regulation that facilitate (or undermine) the benefits of expressive disclosure remain unclear (Reinhold et al., 2018).

In the current dissertation, and as shown in Figure 1, three psychological processes involved in emotional reflection and expression are postulated to promote psychological and physical health in individuals experiencing prolonged and serious stressors: psychological distancing (i.e., adopting a less personal perspective of one's experiences), universality (i.e., viewing one's emotions and experiences as shared by other people), and generativity (i.e., using one's experiences to benefit others). These factors, hypothesized to promote adaptive emotional reflection and expression via emotional processing, will be examined in three inter-related studies using the expressive disclosure paradigm and an adapted expressive helping paradigm.

Factors Promoting Effective Emotional Self-Reflection and Expression

Psychological Distance

Among several putative mechanisms responsible for observed psychological and physical health benefits associated with expressive disclosure, psychological distancing (i.e., adopting a less personal perspective of one's experiences) has garnered some support (Park et al., 2016). Theoretical evidence for psychological distancing as a candidate mechanism is twofold. First, researchers have noted that writing about the self requires a distinction between the self as the writer and the topic of one's writing (Apgar, 1997; Meier, 2002). This separation is likely to promote distance between one's experiencing self, and the content of one's expressed thoughts or feelings (for a review, see Kross & Ayduk, 2017). Theoretically related to the acceptance and commitment therapy construct "self as context" (Hayes et al., 2006; Teasdale et al., 2002), this distanced perspective is likely to engender a more objective, less emotionally salient perspective. Given the emotional nature of expressive disclosure topics, a distanced perspective may serve an emotion-regulatory purpose, allowing space to express one's emotions in a way that leads to understanding. Second, the process of narrative construction benefits from the description of contextual details, including perspectives of other people that may be overlooked when thinking privately about one's experience (Labov & Fanshel, 1977). Therefore, expressive disclosure may naturally encourage writers to adopt a less self-immersed, and hence, psychologically distanced perspective of their experience. The distinction of selves, coupled with contextual emphasis, is likely to result in less affective arousal, less rumination, and greater reappraisal of stressful situations (Libby & Eibach, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993).

Two longitudinal studies on expressive disclosure support the hypothesis that expressive disclosure encourages psychological distancing (Park et al., 2016). In both studies, participants

were assigned to an expressive writing condition or one of two control conditions: fact-writing control (i.e., writing objectively about what they had done since waking up that day) or expressive-thinking control (i.e., thinking privately about one's emotional experience). Participants rated the degree to which they (a) "saw their memory replay through their own eyes" versus "watched it unfold from a psychologically-distanced perspective," and (b) their subjective "distance from the scene in their mind's eye" as they thought about and analyzed their emotions about the experience. Data from both studies demonstrated that expressive disclosure uniquely promoted a psychologically distanced perspective at 1 day, 1 month (Study 1), and 6 months (Study 2) following the intervention (Park et al., 2016). Moreover, the expressive writing group exhibited greater self-reported psychological distancing, less emotional reactivity, and fewer physical symptoms as compared to the control groups. The relationship between expressive disclosure and declines in reported physical symptoms was mediated by the effect of self-distancing on declines in emotional reactivity.

Psychological distancing may also partially explain the long-term benefits associated with expressive disclosure, as distancing has been demonstrated to foster increased insight and optimism about one's ability to cope with similar situations (Kross et al., 2012; Libby & Eibach, 2002). Accordingly, individuals may feel better equipped to approach (versus avoid) stressors, therefore lessening avoidance coping, which tends to be associated with declines in psychological and physical health (Boelen et al., 2010; Morina, 2011; Kashdan et al., 2009; Salters-Pedneault et al., 2004; Stroebe et al., 2007). Of note, psychological distancing is also thought to become increasingly spontaneous over time as users incorporate distanced perspectives into their overall mindset (Denny & Ochsner, 2014). Expressive disclosure typically occurs over several sessions, thus providing practice at adopting a distanced perspective.

Therefore, expressive disclosure about a stressful situation may have the potential to encourage a positive feedback loop of psychological distancing and adaptive coping across various stressful situations. As such, individuals may experience recursive benefits from expressive disclosure that extend beyond the stressor selected for one's writing.

Universality

First identified as a process that facilitates therapeutic effects in group therapy (Yalom, 1995), universality relates to the realization that others have similar problems or are "in the same boat" as others (Yalom, 1995, p. 6). Individuals in stressful circumstances stand to benefit from perceptions of universality because the knowledge that others can understand and relate to them via similar experiences can make them feel less isolated (Weinberg et al., 1995). The act of writing about stressful experiences has the potential to result in a sense of universality for two reasons. First, as described above, expressive disclosure is thought to encourage psychological distancing (Park et al., 2016). Though not explicitly related to universality, psychological distancing may encourage a sense of universality by creating distance from one's egocentric perspective, consequentially redirecting focus to the "bigger picture." This disconnection from the self, coupled with a broadened perspective, may allow writers to focus on their experience as it relates to general human experience. Moreover, when attention is not directed to the details of one's experience, it may be allocated to considering how others have coped with similar situations, contributing to lower feelings of isolation. Indeed, adopting a less egocentric perspective has been demonstrated to reduce feelings of alienation (Kross & Ayduk, 2017; Leitner et al., 2017). Therefore, to the extent that expressive disclosure allows one to consider one's experiences from a less self-immersed perspective, it may also encourage feelings of universality.

Second, research indicates that people often use the generic form of the pronoun "you" when writing about adverse events (Orvell et al., 2017). Distinct from the standard second-person pronoun use, the generic "*you"* refers to an unspecified person (Berry, 2009; Kitagawa & Lehrer, 1990). For example, when Forrest Gump says, "Life is like a box of chocolates; you never know what you're going to get," he uses the generic "you" to refer to humans in general, describing a universal human experience. Notably, researchers have suggested that using the generic "you" may help contextualize negative experiences beyond the self and situate them as shared with others (Kitagawa, & Lehrer,1990; Orvell et al., 2017).

Empirical evidence from one study supports the hypothesis that emotional disclosure may produce a sense of universality. In one study, college students were randomly assigned to write about a recent experience of social rejection with a focus on either: a) broader context of the experience, b) abstract reasons the event occurred, or c) the concrete aspects of their experience (Rude et al., 2011). Planned-comparison analyses indicated that participants who were encouraged to consider the broader context of the experience reported lower rumination and marginally lower depressive symptoms 1-2 days after writing than participants who were encouraged to consider abstract reasons for the event. The authors interpreted these findings as suggestive that thinking about the "big picture" may have enabled participants to view their experience from perspectives outside their current viewpoint (i.e., psychological distance), including situating their experience as similar to the experiences of other people (i.e., universality).

Generativity

Although emotional experiences tend to be shared with other individuals (Rime et al., 1991), the majority of emotion research has focused on intrapersonal aspects of emotion

regulation (c.f., Hofmann, 2014). However, a growing body of research has begun to acknowledge that many experiences of emotion ensue and interact with social context. For example, emotional expression is one social process that can have emotion-regulatory effects (e.g., Horowitz, 1986). Individuals who have experienced stressful events such as cancer or the loss of a loved one often report a desire to connect with others who have shared experiences (e.g., Hargreaves et al., 2018; Robinson & Pond, 2019; Young et al., 2012). In addition, a commonly reported desire is to "give back" to others experiencing a similar stressor (e.g., Allen et al., 2009; Cacciatore & Flint, 2012, Sanders et al., 2008). Accordingly, Rini et al. (2014) developed and tested a novel prosocial writing intervention designed to leverage the benefits of expressive disclosure while addressing the desire for engagement with peers among a group of cancer survivors who had received a stem cell transplant (SCT).

Theoretical underpinnings of the expressive helping intervention are derived from research on altruism and social support provision. Altruism, like universality, has been identified as a therapeutic factor associated with group psychotherapy because opportunities to help others can facilitate a positive self-concept (Yalom, 1995). Theoretically, the opportunity to provide support for others experiencing stressful or uncontrollable circumstances can help address common feelings of powerlessness, and provide a sense of meaning, therefore enhancing positive affect and reducing distress (Piliavin, 2003; Salovey et al., 1991; Schwartz et al., 2003; Schwartz & Sendor, 2000). Indeed, empirical evidence suggests that providing support to others can be equally, if not more, beneficial than receiving support (Brown et al., 2003). Moreover, engaging in prosocial behavior is associated with mental and physical well-being (Brown et al., 2003; Schwartz et al., 2003). The benefits of prosocial behavior mirror those associated with expressive

disclosure, aiding emotion regulation and potentially functioning as an effective coping strategy (Salovey et al., 1991; Schwartz et al., 2003).

Closely related to altruism, generativity also stands out as a potentially beneficial component of the expressive helping intervention. The concept of generativity was first introduced by Erik Erikson, who described the construct as care and concern for a younger generation (Erikson, 1964). Modern conceptualizations of generativity recognize concern and activity in service of contributing to others and society more generally (McAdams & De St Aubin, 1992). Importantly, generativity is associated positively with psychological well-being, better physical functioning, and lower mortality (An & Cooney, 2006; Gruenewald et al., 2012). Given the peer-helping nature of the task, the expressive helping intervention is also likely to engender a sense of contribution to the welfare of a community (Rini et al., 2014). Therefore, generativity stands out as a potential mediator between the expressive helping intervention and subsequent psychological and physical health benefits.

Overview of the Research

Designed to assess whether psychological distancing may explain the beneficial effects of expressive disclosure, Study 1 examines a linguistic indicator of psychological distance (and potentially universality) in written expressive disclosure as a predictor of subsequent depressive symptoms in a sample of women diagnosed with metastatic breast cancer. Findings are discussed in terms of potential implications for expressive disclosure and the developed linguistic coding scheme. Study 2 builds on Study 1, examining the relationships of psychological distancing, universality, and emotional processing with depressive symptoms via experimental manipulation. Specifically, Study 2 examines perceptions of the expressive disclosure essays from Study 1, which were altered to include primarily distanced (i.e., generic you and indefinite

tense) vs. immersed (i.e., first-person pronoun and present tense) language. The purpose of Study 3 is to examine in a randomized, controlled experiment an expressive helping intervention designed to facilitate a sense of generativity in addition to aiding psychological adjustment in young adults who have experienced the loss of a loved one.

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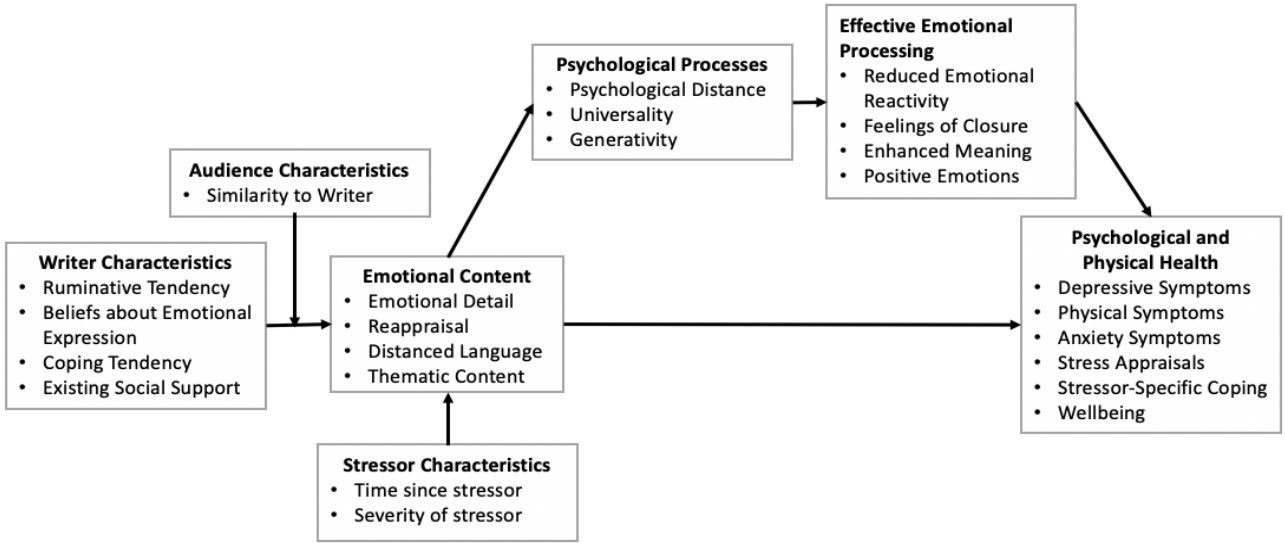
Figures

Figure 1

Theoretical Model



Chapter 2: Expressive Disclosure and Psychological Distancing Among Women with Metastatic Breast Cancer (Study 1)

Abstract

Expressive disclosure about a stressful or traumatic experience can enhance well-being and health. Several mechanisms may facilitate these benefits. In light of research suggesting that expressive disclosure may encourage a less personal perspective of one's experiences (i.e., psychological distancing), this study evaluated a novel qualitative coding scheme to examine distancing in the expressive writing of 31 women with metastatic breast cancer who took part in an expressive disclosure experiment. Coded distancing was tested as a predictor of depressive symptoms 3 months after writing, and it was compared against relevant Linguistic Inquiry and Word Count (LIWC) indicators. Results provide support for the novel coding scheme to indicate psychological distance and demonstrate its unique explanatory function for subsequent depressive symptoms as compared to the LIWC first-person pronoun index and a previously used LIWC composite variable reflecting distancing. Further research is warranted to interrogate the meaning of linguistic distancing indices (e.g., indication of a sense of universality) and translate the findings into an intervention for individuals experiencing advanced cancer or other stressors.

Expressive Disclosure and Psychological Distancing Among Women with Metastatic Breast Cancer

Processing and expressing emotions regarding stressful experiences can enhance psychological and physical health (Frattaroli, 2006). The dominant methodology in such research involves random assignment to writing about one's thoughts and feelings regarding a stressor (i.e., expressive writing; expressive disclosure) or neutral writing (e.g., Pennebaker & Beall, 1986; Pennebaker et al., 1988). Several mechanisms may promote the benefits of expressive disclosure. Adopting a distanced, less personal perspective of one's experiences (i.e., psychological distancing) is one such putative mechanism (Park et al., 2016).

Distancing is a promising candidate mechanism for two reasons. First, adopting a distanced perspective is associated with emotion-regulatory benefits also found in expressive disclosure studies (for a review, see Kross & Ayduk, 2017). A distanced (vs. immersed) perspective is typically less affectively arousing and may result in less rumination and greater reappraisal (Libby & Eibach, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993). Distancing also fosters increased insight and optimism about one's ability to cope with similar situations (Kross et al., 2012; Libby & Eibach, 2002). Second, expressive disclosure likely facilitates a distanced perspective. Research suggests that individuals typically think (as opposed to writing) about past emotional experiences from a self-immersed perspective (Nigro & Neisser, 1983) and therefore experience emotions in the first person (McIsaac & Eich, 2004). In contrast, narrative construction, as required by expressive disclosure, necessitates a separation between the self as the writer and the self as the subject of writing (Apgar, 1997; Meier, 2002). Further, because narrative construction requires the inclusion of contextual details, it can focus attention

on the circumstances surrounding an experience and encourage the writer to adopt the perspectives of several people (Labov & Fanshel, 1977).

A longitudinal study provides preliminary support for the hypothesis that expressive disclosure promotes a distanced perspective (Park et al., 2016). Participants were assigned to expressive disclosure or a control condition: fact writing (i.e., writing objectively about daily activities) or expressive thinking (i.e., thinking privately about one's emotional experience). Relative to the control condition, expressive disclosure uniquely promoted self-reported distancing 1 day, 1 month (Study 1), and 6 months (Study 2) later (Park et al., 2016). Participants also reported that adopting a distanced perspective facilitated emotional processing. Hence, distancing may facilitate constructive reflection by reducing the emotional arousal associated with cognitive representations of negative experiences (i.e., emotional processing; (Foa & Kozak, 1986)

Text Analysis of Expressive Disclosure Content

Findings to date rely on self-reports of psychological distance and emotional reactivity, which are susceptible to biases and assume a high level of self-awareness (Robinson & Clore, 2002). Text analysis can overcome some of the limitations of self-report. Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2007), a text analysis program, computes the frequency and percentage of words in predefined categories. Most relevant to distancing is the use of first-person pronouns. Research suggests the frequency of first-person pronouns (e.g., I, me, my) in naturalistic writing relates to mental health; higher use of first-person relative to non-first-person pronouns is positively correlated with depression (Pennebaker et al., 2003; Rude et al., 2004). Park et al. (2016) assessed the predictive utility of first-person singular pronouns for

subsequently reported distancing. Declines in the use of first-person pronouns across essays predicted greater self-reported distancing after expressive disclosure.

Research has demonstrated the relevance of a distancing composite variable comprised of LIWC scores for articles (e.g., the, a) and words greater than six letters, as well as LIWC inverse scores of first-person singular pronouns (e.g., I, me), present-tense verbs, and discrepancy words (e.g., would, could; Cohn et al., 2004; Mehl, Robbins, & große Deters, 2012). Factor analysis suggests these metrics indicate psychological distance (Cohn et al., 2004; Nook et al., 2017) on one end of a continuum and verbal "immediacy" (Pennebaker & King, 1999) on the other. In one study, participants transcribed their thoughts as they either passively viewed or attempted to regulate their emotional responses to viewing negative images (Nook et al., 2017). Participants instructed to regulate emotions produced the highest distancing scores as indexed by the LIWC composite, and participants with the highest distancing scores were also the most effective regulators as indicated by reductions in self-reported negative affect when instructed to regulate (vs. passively view images).

Despite promising research using LIWC variables as indices of distancing, simply counting words in particular linguistic categories fails to consider contextual linguistic factors. Specifically, LIWC indices do not distinguish between pronouns that act as grammatical subjects (vs. objects) or consider the combination of pronoun and verb tense. This situated grammatical context has been demonstrated to potentially shape the interpretation of pronouns (Packard & Berger, 2020). Moreover, these grammatical distinctions may be key to understanding the intersection of language and distancing in light of research connecting second-person pronouns to psychological distance. Orvell et al. (2017) demonstrated that participants were more likely to use a second-person pronoun (i.e., "you"), presumably to distance themselves, when instructed to

write about a past negative experience as compared to a past neutral experience. Distinct from the pronoun's second-person use, Orvell et al. (2017) examined the "impersonal you," signified by a particular verb tense (i.e., present-indefinite).

The Current Study

The present study aimed to assess whether psychological distance predicts the benefits associated with expressive disclosure in a population of women with metastatic breast cancer (MBC). Women with MBC (i.e., breast cancer that has spread to bone, brain, viscera, or other distant sites) constitute a relevant population in which to study expressive disclosure because the experience of MBC can disrupt daily life, eaffect interpersonal relationships, and incite negative emotions, which can undermine one's sense of control and lead to feelings of isolation (Thompson et al., 1993; Ussher et al., 2006). Furthermore, chronic exposure to stress and negative emotions has been linked to shorter periods of remission and survival (Butow et al., 2001; Chida et al., 2008). Moreover, women living with MBC often face a variable treatment course that can last years. Therefore, women with MBC may stand to benefit from the processes of expressive disclosure.

The parent randomized controlled experiment (Low et al., 2010) compared the effects of expressive disclosure about the MBC experience with a fact-writing control (i.e., writing about the facts of one's MBC diagnosis and treatment) on depressive symptoms, intrusive thoughts, and sleep disturbance 3 months later. Expressive disclosure's effects on the latter two outcomes varied significantly as a function of perceived social support and time elapsed since MBC diagnosis, respectively. No main or moderated effect of expressive disclosure on depressive symptoms was evident, leaving any effect on that outcome unexplained. For this reason, and because depressive symptoms are commonly examined in relation to linguistic features of

distancing (e.g., Edwards & Holtzman, 2017; Zimmermann et al., 2017), distancing interventions (e.g., Kross & Ayduk, 2008; Kross et al., 2012), and studies of spontaneous distancing (e.g., Ayduk & Kross, 2010; Park et al., 2016), depressive symptoms served as the outcome in the present study. Moreover, depression in cancer patients is linked to relevant outcomes, including non-adherence to medical regimens, higher medical care use and costs, delayed return to employment, suicide, and higher cancer mortality (DiMatteo et al., 2002; Fagundes et al., 2017; Fang et al., 2012; Mausbach et al., 2015; Steiner et al., 2008).

The primary goal of this study was to examine the predictive value of psychological distance in expressive disclosure essays on improvement in depressive symptoms. We also aimed to develop a coding scheme for textual analysis of distancing that maximizes objectivity while maintaining sensitivity to contextual aspects of language. We hypothesized that greater distancing, as indicated by the qualitative coding scheme, would predict a decline in depressive symptoms at 3 months. The coding scheme also was compared to LIWC first-person pronoun use and the LIWC distancing composite for unique and combined predictive utility.

Method

Participants

Women were recruited from participants in a descriptive study (Stanton & Low, 2012) who consented to be contacted for future research, flyers posted in oncology clinics, and a listserv for individuals with MBC. Women with MBC and able to write and read in English (N = 62) were randomly assigned to write about (a) their deepest thoughts and feelings regarding breast cancer (n = 31) or (b) facts regarding their breast cancer experience (n = 31). Data from the 31 expressive disclosure participants were used in analyses.

Dependent Variable

Among other measures completed at study entry (T1) and 3 months after the final essay (T2), depressive symptoms were measured with the Center for Epidemiologic Studies-Depression scale (CES-D; Radloff, 1977; T1 α = .85, T2 α = .86). The 20-item scale assesses frequency of depressive symptoms in the past week, with evidence of validity and reliability in breast cancer patients (Hann, Winter, & Jacobsen, 1999).

Expressive Disclosure Procedure

All contact with participants occurred via phone, mail, and e-mail. A researcher described the protocol by phone to interested women; written informed consent and questionnaires were completed by mail. Created by a biostatistician, the randomization schedule was concealed from research assistants until the first writing session. Conducted in four 20-minute sessions within a 3-week interval and following a procedure used in previous expressive disclosure research (e.g., Bishop et al., 2004; Zakowski et al., 2004), a trained assistant called women at the beginning of each session to read the experimental instructions (Pennebaker & Beall, 1986; Stanton et al., 2002) and called again 20-minutes later to ask women to stop writing. After each session, women mailed essays to the research office.

Codebook Creation

The authors (BD, ALS) developed a coding scheme to capture linguistic indicators of psychological distancing not captured by LIWC (see Appendix A). Although LIWC identifies various pronouns, it cannot distinguish a pronoun's grammatical context (i.e., subject vs. object), which may reflect distinct psychological functions (Packard & Berger, 2020; Sundararajan & Kim, 2011). The use of present-tense verbs has been used to signify psychological immersion (Nook et al., 2017). However, present-indefinite tense, which can indicate that something is happening right now, regularly, or unceasingly is often used to make generalizations that extend

beyond the self and can facilitate meaning-making and distancing (Orvell et al., 2017). Although LIWC codes for temporal focus, it does not distinguish between present-indefinite and other forms of present tense. Therefore, the coding scheme was developed to capture nuances of temporal perspective and the presentation of the self as the grammatical subject. Temporal perspective was indicated through categorical numeric coding (i.e., 1 = present, 2 = indefinite, 3 = past, or 4 = future). The grammatical subject of the sentence was indicated as (a) impersonal (i.e., referring to nonspecific or generalized others, such as one, it, "impersonal" you), (b) self (i.e., the writer), (c) a specific other (e.g., my husband), (d) multiple specific others (e.g., my coworkers), (e) an inanimate subject that does not refer to the writer (e.g., the situation, her attitude), or (f) an inanimate subject that refers to something that belongs to the writer (e.g., my hair, my cancer).

Coding Procedure

Following a procedure used to examine autobiographical narratives (Habermas & Berger, 2011; Habermas & de Silveira, 2008; Habermas et al., 2009), each essay was divided into propositions that included all main or subordinate clauses judged to be understandable, even when incomplete, or when acting as a causal prepositional construction (e.g., because). The first author divided the narratives into propositions after achieving inter-rater agreement of 88% with a trained research assistant using the same manual.

After being trained using similar essays from a different data set, 2 undergraduate research assistants coded the propositions using the manual. They independently coded the 124 essays (31 participants X 4 essays) for temporal perspective and grammatical subject. Interrater reliability was excellent ($\kappa = .89$ for temporal perspective; $\kappa = .93$ for subject). To best parallel LIWC indices and account for variability of the total number of propositions contained in essays,

final individual scores for each index were quantified by taking the percentage of total proportions coded as a particular category (e.g., self-subject propositions/total number of propositions).

Distanced Coding Composite

To examine the use of distanced language as a predictor of depressive symptoms, a composite distanced language variable was calculated using a method parallel to that used to calculate composite distancing scores with LIWC indices (Mehl et al., 2012; Nook et al., 2017). Accordingly, Z-scores for the use of self-perspective, present-tense, impersonal-perspective, past-tense, and indefinite-tense were calculated. The Z-scores for variables representing psychological immersion (i.e., self-perspective and present-tense) were then reverse scored and averaged with the 3 representing psychological distance (i.e., impersonal-subject, past-tense, and indefinite-tense). Resulting scores potentially range from −3 to 3, with higher scores indicating more psychological distance.

LIWC Indices

LIWC (Pennebaker et al., 2007) quantifies the percentage of total essay words in particular linguistic (e.g., articles, prepositions) and semantic (e.g., emotion, social) categories. In this study, the use of first-person singular pronouns (e.g., I, me) and a measure of psychological distancing (Mehl et al., 2012; Nook et al., 2017) were computed. Z-scores for the use of first-person singular pronouns (e.g., I, me, my), present-tense verbs, articles (the, a), discrepancy words (e.g., would, could), and words of more than six letters were computed for each participant. The Z-scores for first-person singular pronouns, present-tense verbs, and discrepancy words were reverse-scored and averaged with the Z-scores of the articles and words

of more than six letters index. Low LIWC composite distancing scores indicate psychological immersion, and high LIWC composite distancing scores indicate psychological distance.

Statistical Analysis

Covariates

Given the broad range of participant ages (33–78 years) and months elapsed since metastatic diagnosis (4–93 months) in the sample and their relationships with psychological and physical health in previous research, they were controlled in primary analyses. Analyses also controlled for baseline levels of depressive symptoms.

Distanced Coding Composite

Composite coded distancing scores were entered with covariates (age, time since metastatic diagnosis, baseline depressive symptoms) as predictors of depressive symptoms in one regression analysis.

The distanced coding composite scores, LIWC first-person pronoun index, and LIWC composite were compared in separate multiple regression analyses predicting change in depressive symptoms. Step 1 included covariates (age, time since metastatic diagnosis, baseline depressive symptoms) and the respective LIWC index (mean LIWC first-person pronoun use, LIWC composite). Step 2 included the distanced coding composite.

Results

Descriptive statistics and correlations are displayed in Tables 1 and 2. Multicollinearity was assessed for all predictor variables included in the same model with a correlation of 3 or higher. Variance inflation factors were all below the cutoff of 5 (range = 1.05–1.69).

Relations of Covariates with Predictor Variables and Outcome

Women with longer diagnosis duration evidenced relatively low LIWC first-person pronoun use, $r = -.38$, $p < .05$, and tended to have higher LIWC composite scores, $r = .36$, $p < .05$. Additionally, depressive symptoms scores at the two assessment points were positively correlated, $r = .45$, $p < .05$.

Distanced Coding Composite

As shown in Table 3, greater total coded distanced language significantly predicted fewer depressive symptoms 3 months after expressive disclosure ($b = -13.12$, $t(27) = -3.38$, $p < .01$).

LIWC First-Person Pronoun Index Compared with Distanced Coding Composite

As indicated in Table 4, the positive relationship between the LIWC first-person pronoun index and increase in depressive symptoms at 3 months was not statistically significant when entered with covariates (step 1) or when entered together with the distanced coding composite ($b = 1.25$, $t(26) = 1.50$, $p = .15$). However, the distanced coding composite remained significant over and above the effect of the LIWC first-person pronoun index ($b = -12.02$, $t(26) = -3.12$, $p < .01$).

LIWC Composite Index Compared with Distanced Coding Composite

As indicated in Table 5, the relationship between the LIWC composite index and depressive symptoms at 3 months was not significant when entered with covariates (step 1) or when entered together with the distanced coding composite ($b = 0.43$, $t(26) = 0.173$, $p = .86$). However, the coding scheme for distanced language significantly predicted decreases in depressive symptoms ($b = -13.50$, $t(26) = -2.98$, $p < .01$) over and above the effect of the composite LIWC index.

Discussion

To assess whether linguistic indicators psychological distancing in expressive disclosure essays predicts depressive symptoms, three potential indicators of distancing (i.e., distanced coding composite, first-person pronoun use, composite LIWC index) were examined. As hypothesized, more distanced language as indicated by the coding scheme predicted declines in depressive symptoms 3 months after expressive disclosure over and above the effects of age, time since diagnosis, and baseline depressive symptoms. The effect of coded distanced language on depressive symptoms remained significant after controlling for the LIWC composite index or the LIWC first-person pronoun index. The coding scheme differs from the LIWC indexes insofar as it considers pronouns used only as the subject (as opposed to the object) of the sentence and distinguishes between simple present tense and indefinite tense. LIWC, by contrast, does not differentiate between the relative grammatical function of words and categorizes verbs into broadly defined present, future, and past tense. These results provide evidence of the benefit of using distanced language when expressing emotions associated with a stressful experience (i.e., MBC). The coding scheme may provide a reliable measure of distancing without sacrificing attention to contextual features of language.

Given the superiority of the distanced coding composite versus the LIWC indices in predicting change in depressive symptoms and the finding that the composite predicted a substantial 24% of the variance in the outcome, the meaning of the distanced coding composite requires study. Although the coding scheme captures aspects of language demonstrated to reflect distancing (i.e., grammatical tense, pronoun use), these features may also reflect expressions of universality. The present coding scheme does not distinguish between linguistic indicators of psychological distance and a potentially distinct process related to the normalization of one's

experience. Indeed, the use of the impersonal "you" may reflect distancing, which then allows for normalization of one's experience (Orvell et al., 2017) or vice-versa. For example, one woman used the impersonal you to describe hopefulness resulting from knowing other women's lives have been extended via available therapies:

> It gives me hope through knowing many of these women with breast cancer metastasis have gone on for several years on therapy. You hold onto the idea that just around the corner they will find a new medication, therapy, or maybe a cure for some types of breast cancer. You hope you are still around when that research is available.

No extant research has examined the effects of other pronouns combined with the indefinite tense on psychological distance or related meaning-making benefits. Moreover, normalizing one's breast cancer experience may allow women to feel less isolated, thus reducing subsequent depressive symptoms without eliciting distancing. Future research should disentangle the relationships of distancing, normalization, and emotional processing of one's experience with depressive symptoms via experimental manipulation.

Regarding limitations of the study, the sample size was small ($N = 31$), precluding more sophisticated analyses of moderated effects (e.g., diagnosis duration). The coding scheme is also considerably more labor-intensive than LIWC indices and composites. Furthermore, the generalizability of findings to other populations experiencing chronic stressors is not known. The present findings also speak to questions regarding the relationship between spontaneous distancing and depressive symptoms. Although research has examined the relationship between tendency to distance and major depressive disorder, findings are mixed (Kuyken & Howell, 2006; Newby & Moulds, 2011; Williams & Moulds, 2007). Because distancing was not

manipulated, the present study provides tentative support for a relationship between spontaneous distancing (and/or normalization) and subsequent depressive symptoms.

The current research highlights the relationship between psychological distancing in expressive disclosure essays and subsequent depressive symptoms, and the developed coding scheme offers a novel tool to explore this relationship. These findings suggest that linguistic distancing, and perhaps normalization of one's stress-related thoughts and feelings, may be powerful emotion-regulatory strategies for individuals vulnerable to depressive symptoms. Although the present study did not manipulate linguistic features related to distancing, previous research has demonstrated that instructing individuals to use third-and second-person pronouns results in emotion regulatory benefits (Kross et al., 2012; Orvell et al., 2017). Incorporating impersonal pronouns and indefinite tense may, therefore, bolster these benefits. The minimal invasiveness of linguistically-based interventions leaves them well suited for clinical dissemination. Further development of similar interventions that target distancing and/or normalization in relation to stressful life experiences is a promising future direction.

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Tables

Table 1

Descriptive Statistics of Distancing Variables

	Mean	SD	Min.	Max.
Distanced coding composite	−0.11	0.35	−0.74	0.76
Coded self subject	0.54	0.09	0.26	0.72
Coded impersonal subject	0.19	0.09	0.04	0.56
Coded present tense	0.23	0.04	0.16	0.34
Coded past tense	0.27	0.05	0.17	0.40
Coded indefinite tense	0.26	0.04	0.19	0.36
LIWC first-person pronoun	10.41	1.73	5.06	13.96
LIWC composite	0.00	0.69	−1.24	1.73

Note. SD = standard deviation; LIWC = Linguistic Inquiry and Word Count.

Table 2

Correlations Among Variables

	2	3	4	5	6	7
Distanced coding composite	−.250	.534**	−.112	.219	.254	−.319
LIWC first-person pronoun		−.626**	−.123	−.377*	−.119	.164
LIWC composite			.073	.359*	−.309	−.003
Age				−.167	−.143	−.124
Months of metastatic diagnosis					.133	.230
T1 depressive symptoms						.446*
T2 depressive symptoms						

Note. LIWC = Linguistic Inquiry and Word Count. Zero-order correlations (*r*) are presented. *$p < .05$. **$p < .01$.

Table 3

Results of Multiple Regression Analyses on Depressive Symptoms at 3-Month Follow-up Predicted by Novel Coding Scheme

	b	SE b	*β*	*t*	*p*	CI 95% Lower	CI 95% Upper	*F*	df	*p*	Adj. R^2
Model								5.57**	4, 25	.002	.387
Constant	2.54	7.79		0.33	.784	-13.51	18.59				
Time 1 depressive symptoms	0.63	0.18	.53**	3.52	.002	0.26	0.99				
Age	−0.05	0.12	−.06	−0.42	.681	-0.31	0.20				
Months since metastatic diagnosis	0.10	0.06	.26	1.74	.095	-0.02	0.22				
Distanced coding composite	−13.12	3.88	−.52**	−3.38	.002	-21.11	-5.12				

Note. SE = standard error; CI = confidence interval. *$p < .05$. **$p < .01$.

Table 4

Results of Multiple Regression Analyses on Depressive Symptoms at 3-Month Follow-up Predicted by LIWC First-Person Pronoun and Novel Coding Scheme

	b	SE b	*β*	*t*	*p*	CI 95% Lower	CI 95% Upper	*F*	df	*p*	ΔR^2	Adj. R^2
Step 1								2.96*	4, 25	.040	.321	.212
Constant	−17.71	15.49		−1.14	.264	-49.61	14.19					
Time 1 depressive symptoms	0.53	0.20	.45*	2.67	.013	0.12	0.93					
Age	0.03	0.14	.03	0.19	.853	-0.27	0.32					
Months since metastatic diagnosis	0.11	0.07	.302	1.65	.112	-0.03	0.26					
LIWC first-person pronoun	1.73	0.94	.335	1.84	.078	-0.21	3.68					
Step 2								5.13**	5, 24	.002	.196	.416
Constant	−14.04	13.39		−1.05	.305	-41.67	13.60					
Time 1 depressive symptoms	0.64	0.17	.55**	3.69	.001	0.28	1.00					
Age	−0.01	0.12	−.01	−0.07	.943	-0.26	0.25					
Months since metastatic diagnosis	0.13	0.06	.35*	2.21	.037	0.01	0.26					
LIWC first-person pronoun	1.25	0.83	.24	1.50	.146	-0.46	2.95					
Distanced coding composite	−12.02	3.86	−.48**	−3.12	.005	-19.98	-4.06					

Note. SE = standard error; CI = confidence interval; LIWC = Linguistic Inquiry and Word Count. *$p < .05$. **$p < .01$.

Table 5

Results of Multiple Regression Analyses on Depressive Symptoms at 3-Month Follow-up Predicted by LIWC Composite and Novel Coding Scheme

	b	SE b	*β*	*t*	*p*	CI 95% Lower	CI 95% Upper	*F*	df	*p*	ΔR^2	Adj. R^2
Step 1								2.39	4, 25	.078	.276	.160
Constant	1.65	9.60		0.17	.865	-18.13	21.43					
Time 1 depressive symptoms	0.57	0.21	.49*	2.69	.013	0.13	1.01					
Age	0.01	0.15	.01	0.04	.971	-0.30	0.31					
Months since metastatic diagnosis	0.10	0.07	.25	1.37	.184	-0.05	0.24					
LIWC composite	−3.18	2.50	−.25	−1.27	.216	-8.33	1.98					
Step 2								4.29	5, 24	.006	.196	.362
Constant	2.10	8.39		0.36	.724	-14.3	20.31					
Time 1 depressive symptoms	0.62	0.19	.53**	3.32	.003	0.23	1.00					
Age	−0.06	0.13	−.07	−0.44	.666	-0.32	0.21					
Months since metastatic diagnosis	0.10	0.06	.25	1.56	.133	-0.03	0.22					
LIWC composite	0.43	2.50	.03	0.17	.864	-4.72	5.58					
Distanced coding composite	−13.50	4.53	−.53**	−2.98	.006	-22.84	-4.15					

Note. SE = standard error; CI = confidence interval; LIWC = Linguistic Inquiry and Word Count. *$p < .05$. **$p < .01$.

Chapter 3: Perceptions of Psychological Distancing and Universality in Expressive Writing Essays of Women with Metastatic Breast Cancer (Study 2)

Abstract

Expressively writing about a stressful experience can promote emotional recovery. Individuals often use the "generic you"—a particular form of second-person pronouns—when writing about negative experiences (Orvell et al., 2017). In contrast to the canonical you, which refers to a specific person and can be coupled with any verb tense, the generic you is typically combined with the indefinite verb tense to convey information that applies across time, people, and contexts (e.g., "You win some, you lose some."). Research has demonstrated that the use of the generic you is associated with psychological distancing (i.e., adopting a less personal perspective of one's experiences), which may contribute to emotional recovery. However, less is known about the use of the generic you as an indicator of a sense of universality (i.e., the perception that one's experiences and emotions are common to many individuals). The aim of the present study was to understand how the use of the "generic you" with indefinite verb tense in expressive disclosure essays influences readers' perceptions of the writer's psychological distance, universality, and intrusive thoughts and avoidance regarding the discussed stressor (i.e., the personal experience of metastatic breast cancer) relative to first-person pronouns and perfect-present verb tense. Participants (N = 171) recruited via the University of California, Los Angeles undergraduate psychology subject pool were randomly assigned to read an expressive essay written by an anonymous woman diagnosed with metastatic breast cancer about their cancer experience. The narratives, originally written by women diagnosed with metastatic breast cancer (Low et al., 2010), were altered to vary only in pronouns (i.e., primarily first or second person) and grammatical tense (i.e., primarily present perfect or present indefinite). After reading the

essay, participants' perceptions of the author's psychological distance and universality reflected in the essay and perceptions of the author's intrusive thoughts/avoidance regarding the cancer experience were assessed. The results replicated those of previous research, indicating that essays with the generic you and indefinite verb tense were associated with greater perceptions of psychological distance relative to primarily first-person pronouns and present verb tense (b = 8.31, SE = 4.12, $t(167) = 2.02$, $p < .05$). Additionally, essays that used the generic you and indefinite verb tense were rated as reflecting more universality than those that used first-person pronouns and present tense ($b = 0.32$, $SE = 0.16$, $t(167) = 2.00$, $p < .05$). However, the effect of the generic you and indefinite verb tense on participants' perceptions of the writer's intrusive thoughts and avoidance regarding the cancer experience was not statistically significant. The results suggested that linguistic features in expressive disclosure essays, such as the use of the generic "you" and indefinite verb tense, which have been understood to reflect psychological distance, may also reflect a sense of universality. These findings align with those of existing research, indicating that situating challenging events within a broader context is a fundamental mechanism by which individuals derive meaning from challenging experiences.

Perceptions of Psychological Distancing and Universality in Expressive Writing Essays of Women with Metastatic Breast Cancer

Chronic exposure to stress can result in debilitating psychosocial and physical morbidities (Thoits, 2010). However, research has suggested that effective emotion regulation can mitigate these detrimental effects (e.g., De Castella et al., 2018; Márki et al., 2017; Modecki et al., 2017). Writing about stressful or traumatic experiences (e.g., expressive disclosure) may facilitate emotion-regulation processes, which can lead to psychological benefits, including reductions in depressive symptoms (for a review, see Frattaroli, 2006).

Expressive disclosure is one empirical protocol commonly used to examine the effects of emotional self-reflection and expression about stressful circumstances on subsequent psychological and physical health (Pennebaker & Beall, 1986). Typical expressive disclosure studies involve writing briefly about one's thoughts and feelings surrounding a stressful or traumatic experience across several sessions (Pennebaker & Beall, 1986). Compared to control conditions, expressive disclosure produces psychological and physical health-related benefits in diverse populations (Frattaroli, 2006; Pennebaker & Seagal, 1999; Sloan & Marx, 2004; Smyth, 1998).

Several mechanisms may promote the benefits of expressive disclosure. Two proposed mechanisms are psychological distancing, which involves taking a less personal perspective of one's experiences (Park et al., 2016), and an enhanced sense of universality, which refers to feeling a sense of similarity to others regarding one's experiences (Yalom, 1995, p. 6). The primary goal of the present study was to determine how the use of different pronouns (i.e., first and second person) and grammatical tense (i.e., present perfect and indefinite present) influences

a reader's perceptions of the author's psychological distance from and sense of universality in relation to a stressor described in an expressive writing essay.

Psychological distancing is a promising candidate mechanism of the beneficial effects of expressive disclosure for two reasons. First, adopting a distanced perspective is associated with the emotion-regulating benefits found in expressive disclosure studies. For example, a distanced (vs. immersed) perspective is typically less affectively arousing and may result in less rumination and greater reappraisal (Libby & Eibach, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993). Psychological distancing also fosters increased optimism about one's ability to cope with similar situations in the future (Kross et al., 2012; Libby & Eibach, 2002). Second, features of expressive disclosure likely facilitate a distanced perspective. Research has suggested that individuals typically think (versus write) about past emotional experiences from a self-immersed perspective (Nigro & Neisser, 1983), and therefore, they experience emotions in the first person (McIsaac & Eich, 2004). In contrast, the narrative construction required by expressive disclosure necessitates a separation between the self as the author and the self as the subject of the writing, thus encouraging a third-person perspective. Similarly, because narrative construction requires the inclusion of contextual details, expressive disclosure can focus attention on the circumstances surrounding an experience and encourage the writer to adopt multiple perspectives.

In linguistic distancing research, participants are often instructed to use third-person pronouns (e.g., he/she/they) to talk, think, or write about an experience (Grossmann & Kross 2014; Kross & Ayduk, 2017; Moser et al., 2017). Because these pronouns are less personal than first-person pronouns (e.g., I/me), they are thought to extend one's perspective beyond the self to encourage a more objective view of one's experience (for a review, see Kross & Ayduk, 2017). However, third-person pronouns are infrequently used to describe personal experiences. The

second-person pronoun, “you,” in contrast, is commonly used in everyday vernacular to describe universal human experiences (Kitagawa & Lehrer, 1990). Distinct from its canonical use, which refers to a particular person (e.g., “How are **you** doing?”), the generic you refers to people in general (e.g., “**You** can’t change the past.”; Berry, 2009; Kitagawa & Lehrer, 1990).

Although the canonical you can be conjoined with any verb tense, the generic you is signified by the indefinite verb tense (Kitagawa & Lehrer, 1990). The indefinite verb tense, which indicates the verb is happening right now or regularly, often describes universal truths (e.g., “The sun rises in the east”). Given that the generic you uses the indefinite verb tense, it may facilitate natural ways of discussing personal experiences from a universal, less egocentric perspective. For example, when Forrest Gump says, “Life is like a box of chocolates; **you** never know what **you’re** going to get,” he uses the indefinite verb tense and the generic you to describe a universal experience (Zemeckis, 1994).

Research has suggested that people spontaneously use the generic you when describing past negative experiences, and the use of the generic you is associated with greater meaning-making and lower emotional reactivity (Orvell et al., 2017). Researchers have theorized that the generic you allows for the construction of generalizable lessons surrounding difficult experiences (Orvell et al., 2017; Orvell et al., 2020). The results from a study exploring psychological distancing in expressive disclosure essays of women diagnosed with metastatic breast cancer (Study 1) supported this view (Drake et al., in preparation). Specifically, a novel linguistic coding scheme designed to capture linguistic features of psychological distancing (See Study 1, Codebook Creation and Coding Procedure) was developed and applied to expressive disclosure essays of women who took part in a previous study (Low et al., 2010). The generic you was one such feature captured by this coding scheme. Analyses revealed that distanced language

predicted declines in depressive symptoms at 3 months following the expressive disclosure intervention, over and above the effects of covariates, including baseline depressive symptoms. The coding scheme predicted 24% of the variance in depressive symptoms, highlighting the potential importance of distanced language as an indicator of adaptive emotion regulation.

Despite these promising results, the effects of using the generic you require additional study. Although the coding scheme described above captures aspects of language demonstrated to reflect psychological distancing (i.e., grammatical tense and pronoun use), these features may also reflect a theoretically related but potentially distinct construct of universality or the perception of one's experience as common among many people. More specifically, the use of the generic you while writing about difficult experiences may normalize one's experience as shared with others.

The hypothesis that the generic you may reflect universality is motivated by two observations. First, the generic you is signified by the indefinite verb tense, which is often used to convey beliefs, truths, or experiences that are generalizable across people and contexts (e.g., "When **you** get a breast cancer diagnosis, **you're** terrified"), as compared to information about a particular person or situation (e.g., "When **you** got your breast cancer diagnosis**, you** were terrified"; Bolinger, 1979; Kamio, 2001; Kitagawa & Lehrer, 1990). Second, because the generic you involves the second-person pronoun, it may have a distinct function relative to other uses of the indefinite-present tense by creating a sense of direct address and personal involvement of a reader or listener. Accordingly, the generic you may help to create a sense of connection and empathy between a speaker and listener, potentially suggesting that the speaker understands and can relate to the listener's experience, further reinforcing the perceived universality of the experience.

Recent research supports the hypothesis that the generic you encourages feelings of understanding and connection. Using crowdsourced data from Amazon Kindle, researchers found that highlighted passages were significantly more likely to contain the generic you as compared to unhighlighted passages (Orvell et al., 2020). Researchers interpreted these results to indicate that the generic you evokes "resonance"—that is, the feeling of strong connection or similarity with an idea or concept (Lewis et al., 2001; Ruthven, 2021). This hypothesis was further tested using an experimental design that required participants to rate the degree to which they resonated with statements expressed using either the generic you or first-person singular pronouns (Orvell et al., 2020). The findings supported the hypothesis in that participants rated statements expressed using the generic you as resonating significantly more than those written with first-person singular pronouns (Orvell et al., 2020). Given that both resonance and universality describe a quality of connection and commonality, the generic you may provide individuals with a sense of validation and understanding by emphasizing a quality of connection and commonality.

Results from an expressive disclosure study that manipulated instructions to encourage participants either to situate their negative experience in a broader human context or to consider the abstract reasons for the negative experience support the hypothesis that sentiments of universality (and psychological distance) in expressive disclosure essays may benefit the writers (Rude et al., 2011). Specifically, college students were randomly assigned to write about a recent experience of social rejection with a focus on (a) the broader context of the experience, (b) abstract reasons the event occurred, or (c) the concrete aspects of their experience (Rude et al., 2011). Participants who considered the broader context of the experience evidenced significantly lower rumination and marginally lower depressive symptoms 1–2 days after writing as compared

to participants who considered the abstract reasons for the event. These results suggest that thinking about the "big picture" may enable individuals to view their experience from perspectives outside their current viewpoint (i.e., psychological distance), including a broader human context, for example, by reflecting on how people generally experience stress and loss (i.e., universality).

Indeed, researchers have proposed that the use of the generic you while discussing challenging experiences may support emotional recovery by encouraging meaning-making—a process that entails the confrontation of the stressor and associated emotions (Orvell et al., 2017). Avoidance, on the other hand, involves consciously or unconsciously suppressing thoughts, feelings, or reminders associated with the stressor (Foa et al., 1991). While avoidance can confer short-term emotional relief, a body of research documents that it often leads to an increased preoccupation and intrusive thoughts associated with stressful experiences, as cognitive perceptions of the stressor remain unaltered (Cribb et al., 2006; Foa & Kozak, 1986; Hayes et al., 1996, Moulds et al., 2007; Wegner et al., 1987; Kross & Ayduk, 2008, 2017).

Given that psychological distancing and universality both involve adopting a less personal perspective of one's experiences, they may appear to support avoidance. However, they are theorized to foster constructive engagement with stressors by diminishing emotional reactivity, thereby enhancing individuals' willingness to confront stressors that might have otherwise been avoided (Ayduk & Kross 2010; Orvell et al., 2017). For example, psychological distancing facilitates a balanced perspective of one's experiences, reducing emotional reactivity and enhancing problem-solving. Similarly, universality can provide comfort and a broader outlook, facilitating the reframing of negative events and promoting a helpful reinterpretation. Accordingly, the use of the generic you in expressive disclosure essays may also reflect reduced

avoidance of the stressor, which may be directly facilitated by psychological distancing and universality.

The Current Study

The present study sought to broaden this line of research by examining the relationship between psychological distancing and universality in emotional disclosure essays via an experimental manipulation. The participants diagnosed with metastatic breast cancer who provided the expressive disclosure essays coded in the previous study cannot be recontacted per Institutional Review Board (IRB) regulations. Therefore, the present study examined readers' perceptions of a selection of these essays, which were experimentally manipulated to be written using either indefinite verb tense and second-person pronouns (i.e., generic you) or perfect-present tense and first-person pronouns (i.e., first-person perspective). It was hypothesized that reading essays written from a first-person perspective would result in lower perceptions of psychological distance, lower normalization of the metastatic breast cancer experience (i.e., universality), and greater perceptions of the author's intrusive thoughts/feelings and avoidance related to cancer compared to reading essays written with the generic you.

Method

Participants

Participants were 171 native English-speaking undergraduate students (note that data from one participant were lost due to equipment failure) at the University of California, Los Angeles (UCLA), who were recruited via the UCLA undergraduate psychology subject pool after receiving UCLA Institutional Review Board approval. All participants received course credit for their participation.

Materials

Essays were selected from the Low et al. (2010) study of expressive disclosure in women with metastatic breast cancer. Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2007) indices of word count, use of first-person pronouns, use of negative and positive emotion words, and coded valence (as rated by research assistants) guided essay selection. Essays were selected from the fourth and final writing session because this session represented the culmination of the previous writing sessions. A review of available essays and associated LIWC and valence indices resulted in three essays of similar length (word count range = 420 - 461), with similar proportions of first-person pronouns (range = 9.52 – 12.30), negative (range = 1.90 – 2.73) and positive (range = 2.05 – 5.23) emotion words, and with similar valence ratings (range = 4 – 4.5) that were selected as stimuli.

Because the majority of the essay content was written in the first-person perspective, the unaltered essays served as the first-person condition stimuli. For the second-person condition stimuli, the three essays were translated by a trained research assistant into a primarily second-person perspective by altering pronouns and verb tense to indicate generic you (e.g., "I do not want to put goals too far into the future because that makes me feel a little bit hopeless" → "You do not want to put goals too far into the future because that makes you feel a little bit hopeless"). Essays from the first-person and the second-person perspective are included in Appendix B.

Procedure

Undergraduates self-enrolled in the study via the UCLA Psychology Department's electronic recruitment system. The study description stated that researchers sought to "understand how different types of language influence our perceptions of described experiences." Following enrollment, participants completed one 30-minute session in the lab (prior to the COVID-19 pandemic; $n = 40$) or remotely (during the COVID-19 pandemic, $n =$

131). Upon arrival to the lab (in lab) or prior to entering the survey (remote), participants were informed they would be asked to read an essay that details one woman's deepest thoughts and feelings regarding her breast cancer.

After providing verbal (in lab) or virtual (remote) informed consent, participants were directed to a Qualtrics survey that automatically randomly assigned them to one of the two conditions: first person (primarily first-person essay; $n = 85$) or generic you (primarily second-person essay, $n = 86$). Each participant was presented with one of three essays—also randomly assigned—corresponding with their respective condition.

After reading the essay, participants completed a questionnaire about their perceptions of the essay and the writer and answered demographic questions. Finally, participants were provided with debriefing information that detailed the study's aims and experimental manipulation.

Measures

Psychological Distance

Perceptions of the writer's psychological distance while writing the essay were measured using an item adapted from Kross and Ayduk (2011). Participants were asked to indicate the degree to which they thought the writer saw the described experiences, thoughts, and emotions "through her own eyes" (primarily immersed) versus "as an observer" (primarily distanced), using a sliding 1 (*immersed*) to 100 (*distanced*) scale.

Universality

Perceptions of universality in essays were measured using an adapted version of a questionnaire subscale used in research on group therapy and social support groups (Weinberg et al., 1995; Yalom, 1995). Participants were asked to rate their agreement with a series of

statements about the author's relationship to other women with metastatic breast cancer. The universality subscale consisted of 5 items (e.g., "The writer feels understood and accepted by other women with metastatic breast cancer" and "The writer has learned that others have the same feelings and fears about metastatic breast cancer that she does") that were rated on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*agree strongly*). Item scores were averaged to produce an overall universality rating (range = 1–7), with higher scores indicating greater perceptions of universality. The universality subscale demonstrated excellent internal consistency (Cronbach's α = .91) in the present study, which is consistent with previous research (Cronbach's α = .95; Weinberg et al., 1995).

Intrusive Thoughts and Avoidance

Participants were asked to rate the essay author's intrusive thoughts and avoidance regarding her breast cancer by completing an adapted version of the impact of events scale (IES; Weiss, 2007). The IES is a measure of the frequency of intrusive thoughts and avoidance of distressing thoughts. Participants rated the extent to which they agreed with statements related to the writer's experience of metastatic breast cancer using a 0 (*not at all*) to 4 (*extremely*) Likert scale. Example items included "Other things keep making her think about her illness," "She has waves of strong feelings about her illness," and "She tries not to think about her illness." Resulting item scores were averaged, with higher scores indicating greater perceptions of intrusive and avoidant thoughts regarding the experience of metastatic breast cancer by the writer (range = 0–4). The IES has demonstrated good internal consistency reliability in previous research (Cronbach's α = 0.83; Lepore et al., 2000) and in the present study (Cronbach's α = 0.83).

Statistical Analysis

All analyses were conducted in R. Descriptive statistics were examined to characterize the study's sample. Differences in demographic variables were compared across conditions and experimental setting (in lab vs. remote) using Fisher's exact and independent sample t-tests.

Data were examined for the assumptions of multivariate normality, linearity, and homoscedasticity. Durbin-Watson statistics were examined to assess the assumption of independence of errors for all models. Heteroscedasticity was examined using the Breusch-Pagan test for all models.

Separate linear regression analyses were performed using the **lm** package on measures of perceptions of the essay writers' psychological distance, universality, and intrusive thoughts and avoidance regarding breast cancer. To account for any variance introduced by the specific essay content, essay, and condition assignment were entered into the models as independent variables.

Results

A total of 171 participants (40 in lab) completed the study. No significant group differences emerged ($p > .05$) on any demographic variable (i.e., ethnicity, gender, and age), previous experience with cancer, or outcome variables when comparing in-lab versus remote experimental settings. Accordingly, data were pooled for analysis.

As shown in Table 6, there were no significant differences regarding demographic characteristics across condition assignment ($ps \geq .05$). Participants were mostly female (67%), with a smaller proportion identifying as male (31%) or nonbinary (2%). The average age was 19.75 years ($SD = 1.71$). The sample was diverse with regard to race/ethnicity, with the largest proportion identifying as White (29%); followed by Asian (27%); Hispanic, Latino, or Spanish

(23%); Black (5%); Native American/Alaskan Native (4%); Native Hawaiian/Pacific Islander (3%); and Multiracial (9%).

Zero-order correlations of dependent variables are displayed in Table 7. Breusch-Pagan and Durbin-Watson tests indicated the absence of heteroscedasticity and autocorrelation of errors for all models, respectively (*ps* > .05).

Psychological Distance

As shown in Table 8 and Figure 2, there was a significant effect of condition on perceptions of the writer's psychological distance ($b = 8.31$, $SE = 4.12$, $t(167) = 2.02$, $p < .05$). On average, participants who read essays that used the generic you perceived the writer to be more psychologically distanced ($M = 37.87$, $SD = 28.31$) than did participants who read essays that primarily used first-person singular pronouns ($M = 29.51$, $SD = 25.10$). The effects of the specific essays were not significant (*ps* > .05).

Universality

As displayed in Table 9 and Figure 3, the effect of condition on perceptions of the writer's universality was significant ($b = 0.32$, $SE = 0.16$, $t(167) = 2.00$, $p < .05$). Essays that used the generic you were, on average, perceived as reflecting more universality ($M = 4.01$, $SD = 1.10$), as compared to those that primarily used first-person singular pronouns ($M = 3.69$ $SD = 0.96$). There were no significant effects of the specific essays on perceptions of universality (*ps* > .05).

Intrusive Thoughts and Avoidance

As indicated in Table 10 and Figure 4, there was no significant effect of condition on perceptions of the writer's intrusive thoughts and avoidance regarding her breast cancer ($b = -0.07$, $SE = 0.10$, $t(167) = –0.73$, $p = .47$). The effect of the third essay was marginally significant

(b = –0.21, SE = 0.12, $t(167)$ = –1.74, p = .08) such that regardless of condition, participants who read the third essay, on average, rated the writer as having more intrusive thoughts and avoidance of her cancer diagnosis (M = 1.64, SD = 0.60) than participants who read the first essay (M = 1.85, SD = 0.69) or the second essay (M = 1.93, SD = 0.68).

Discussion

Through experimental manipulation of pronoun use and grammatical tense in expressive essays written by women diagnosed with metastatic breast cancer, the current study investigated young adults' perceptions of the authors' psychological distancing, universality, and cancer-related intrusive thoughts and avoidance. To this end, participants were instructed to rate their perceptions of these variables after reading expressive disclosure essays from a prior study (Low et al., 2010) that were modified to use either predominantly second-person pronouns and indefinite verb tense (i.e., generic you) or first-person singular pronouns and perfect-present verb tense. The findings supported two of the three hypotheses. Specifically, participants who read essays with first-person pronouns and perfect-present verb tense had significantly lower perceptions of the essay author's psychological distance and universality compared to participants who read the same essays altered to use the generic you and indefinite verb tense. However, the effect of the generic you and indefinite verb tense on perceptions of the essay writer's cancer-related intrusive thoughts and avoidance did not differ significantly from perceptions of essays written in first-person pronouns and perfect-present tense.

These findings suggest that the use of generic you and indefinite verb tense may have a dual effect of increasing perceptions of both psychological distance and universality. This study's results support the conclusions drawn in Study 1, suggesting that language associated with psychological distance may also reflect a normalization of one's experience as shared by

others. Furthermore, these findings suggest that the use of general language and indefinite verb tense may help individuals expand their perspective. Notably, both psychological distance and universality require individuals to transcend their own perspective, with psychological distance entailing adopting an outsider's viewpoint and universality encouraging a more expansive perspective that encompasses people in general. When applied in the context of discussing or reflecting on stressful events, these findings are consistent with those of extant research and theoretical models positing that situating negative events within a broader context is a fundamental mechanism by which individuals derive meaning from challenging experiences (Davis et al., 1998; Frankl, 1966; Janoff-Bulman & Frantz, 1997; Kross & Ayduk, 2017; Orvell et al., 2017; Park, 2010).

The absence of an effect on perceived cancer-related intrusive thoughts and avoidance in the current study could be attributed to several factors. One possible explanation is that intrusive thoughts and avoidance related to cancer may be relatively concrete in nature as compared to psychological distance and universality, which may be more abstract and subjective. Specifically, because the essays used in the study included descriptions of the writer's experiences, which included discussions of avoidance (e.g., "This all helps me maintain and not dwell on any negatives . . . I do not want to go there") and painful thoughts related to metastatic breast cancer (e.g., "I do not want to spend the rest of my life in bed. I hate to think of that happening [because I] did not have much time in life"). These descriptions may have made the perception of intrusive thoughts and avoidance more concrete, which could have made it more difficult for changes in linguistic cues to have a significant impact on the participants' perceptions. In contrast, perceptions of psychological distance and universality may be more subjective and less directly observable in the essay content. As a result, changes in pronoun use

and grammatical tense may have had a greater impact on participants' perceptions of these constructs. The marginal statistical significance of the third essay provides some support for this hypothesis, suggesting that the specific content of the essays may have exerted a stronger influence on participants' perceptions than did the language used in the essays. Additionally, it is important to consider the possibility that generic language and grammatical tense actually may not impact perceptions of cancer-related intrusive thoughts and avoidance. To further understand the relationship between language use and cancer-related intrusive thoughts and avoidance, future research could manipulate the language that people diagnosed with cancer use to write about their own personal negative experiences and subsequently measure their intrusive thoughts and avoidance with regard to cancer.

Regarding limitations, the interpretation of results is constrained by the reliance on participants' perceptions of the writer's use of the generic you and indefinite verb tense in expressive disclosure essays, which may not fully reflect individuals' personal experience of using these linguistic features in one's own writing, and their impact on psychological distance, universality, and stressor-related intrusive thoughts and avoidance. Although this methodology allows for experimental control and is aligned with previous research examining perceptions of the generic you (i.e., Orvell et al., 2020), it remains unclear whether the spontaneous or instructed use of the generic you and indefinite verb tense leads to feelings of psychological distance and universality. Future research could assess feelings of psychological distance and universality after instructing participants to write about their negative experiences using the generic you and indefinite verb tense. It should also be noted that the majority of the sample were young adults without prior personal experience of the stressor described in the essays (i.e., metastatic breast cancer). Consequently, the generalizability of the findings to other age groups

and the impact of the generic you and indefinite tense while reading about stressors with which individuals share personal experiences are limited. Future research could examine whether the use of the generic you and indefinite tense influences perceptions of psychological distance, universality, and stressor-related intrusive thoughts and avoidance when reading about personally relevant experiences.

Understanding how different linguistic features, including the generic you and indefinite verb tense, affect perceptions of psychological distance and universality during discussions of negative experiences is a crucial step in advancing knowledge of the potential role of language in promoting the benefits associated with emotional disclosure. Another remaining question for future research is to examine the contexts that encourage individuals to use generic language (e.g., the generic you) and indefinite verb tense when they discuss their negative experiences as well as the impact of such language use on the way their experiences are perceived and understood. A valuable next step would be to study the social contexts that encourage the spontaneous use of these linguistic features. For example, when an individual writes or talks to someone who has shared a similar experience, they may be more likely to use generic language and indefinite verb tense as a way of connecting their experience to others and acknowledging the universality of their experience. Conversely, when discussing a specific stressor with someone who may not have had a similar experience, the use of specific language and concrete verb tense may be more effective in communicating the details and nuances of the experience.

The current study highlights a promising avenue for future research, suggesting that linguistic features traditionally understood as indicating psychological distance, such as the generic you and indefinite verb tense, may also reflect a sense of universality. By experimentally manipulating these linguistic features in expressive disclosure essays, the findings indicate that

they can influence perceptions of both psychological distance and universality. Further research is needed to explore this possibility and to understand how these linguistic choices can be leveraged to promote emotional recovery and well-being. Such insights may ultimately inform the development of more effective interventions that harness the power of language in promoting resilience and coping. Future research should examine how the use of generic language and indefinite verb tense differs across social contexts and stressor-specific situations. Ultimately, a better understanding of the role of language in emotional disclosure could inform the development of linguistically based interventions aimed at promoting emotional well-being and resilience.

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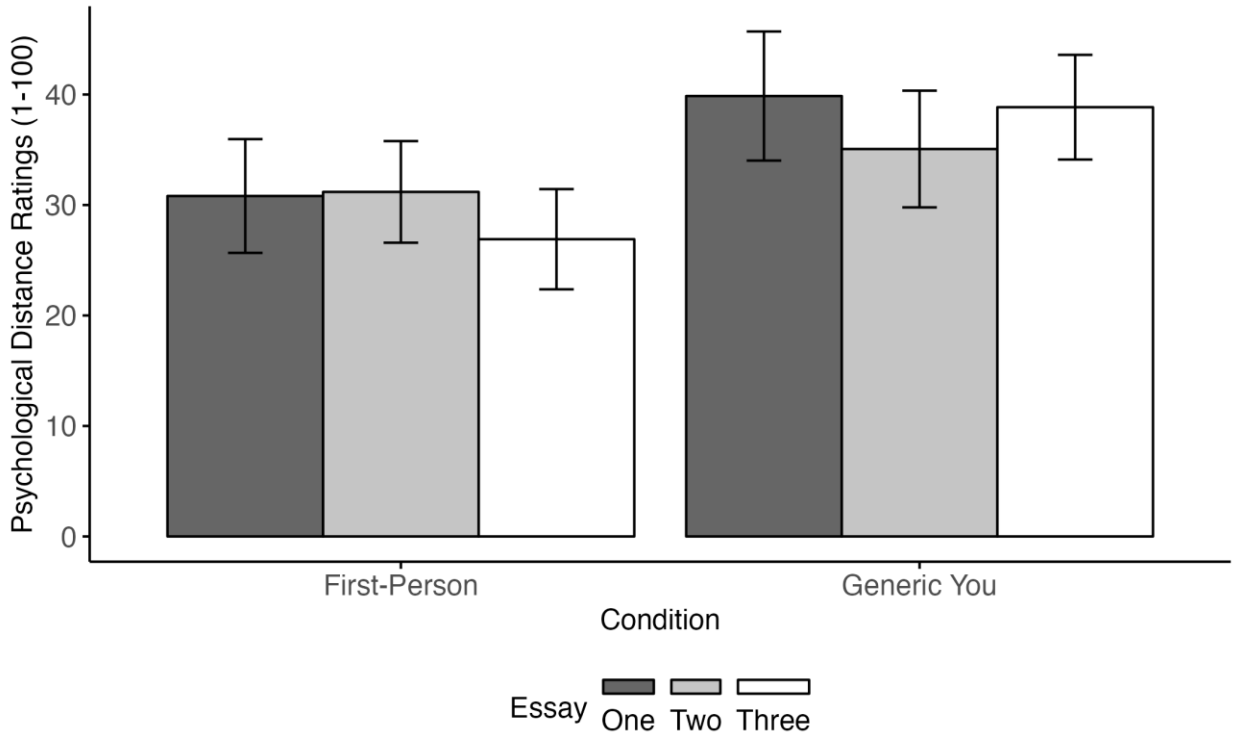
Figures

Figure 2

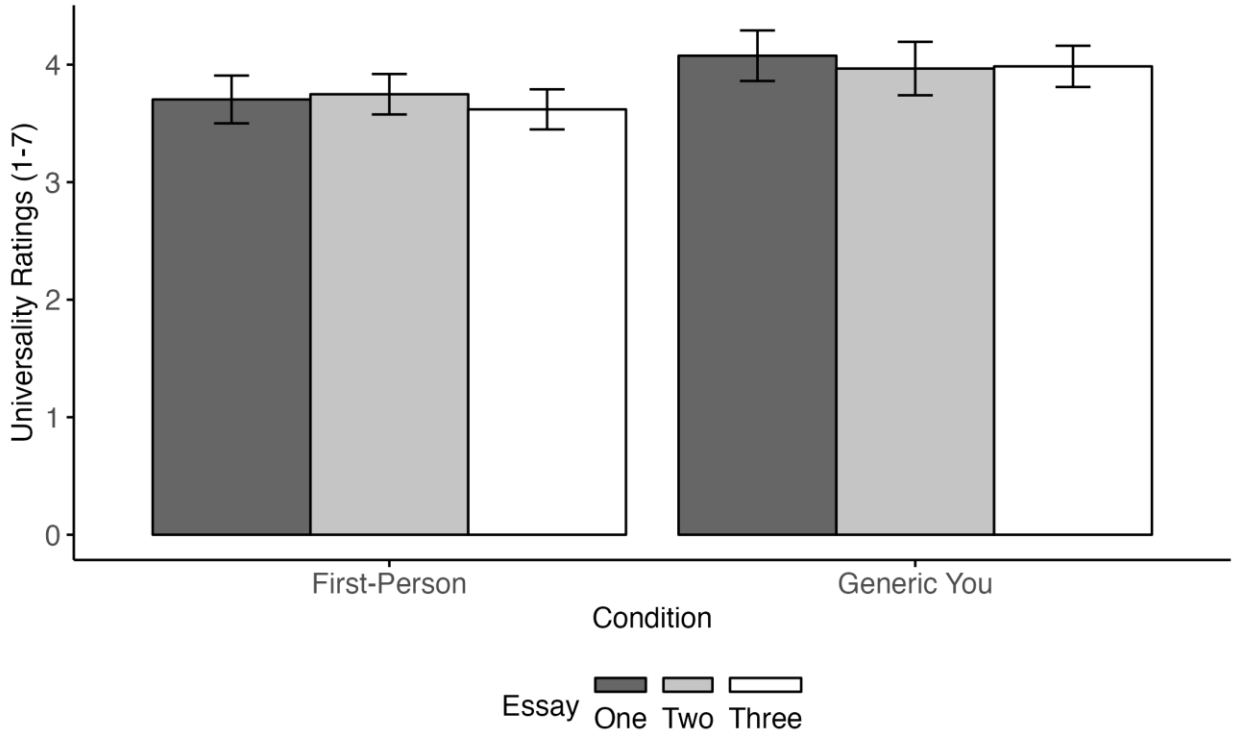
Graph Illustrating Perceived Psychological Distance Ratings by Condition and Essay



Note. Error bars represent standard errors.

Figure 3

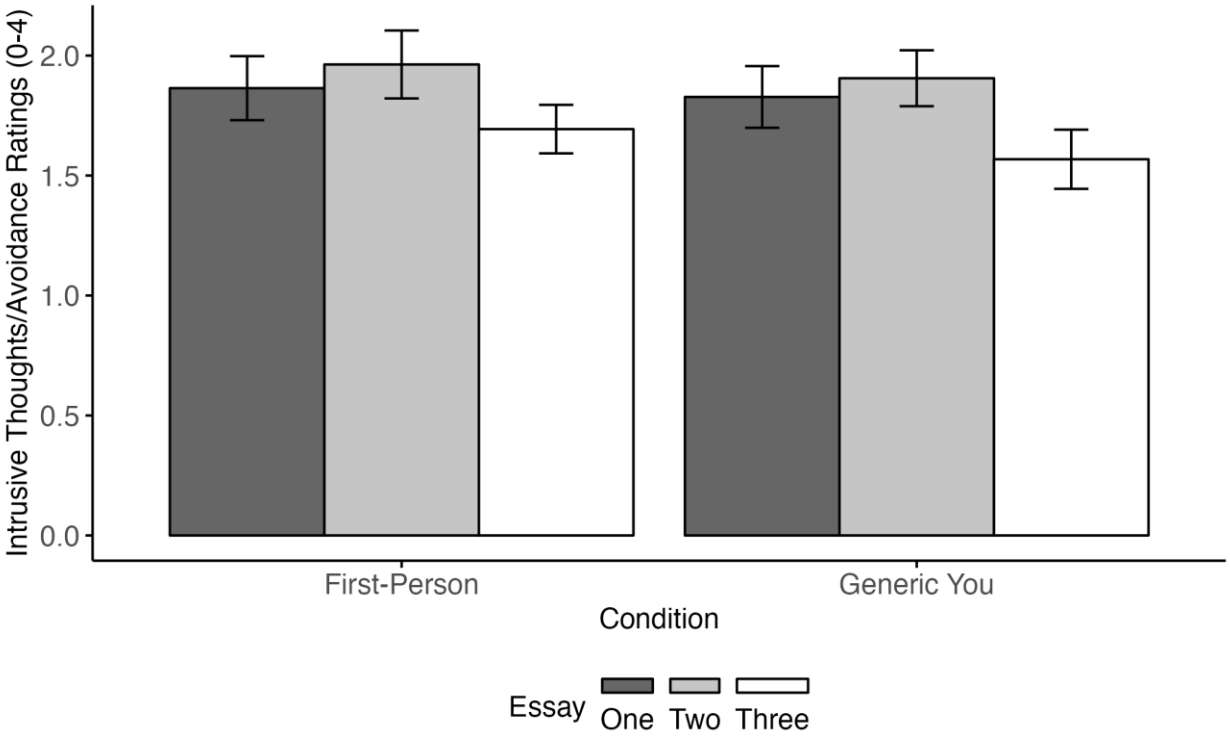
Graph Illustrating Perceived Universality Ratings by Condition and Essay



Note. Error bars represent standard errors.

Figure 4

Graph Illustrating Perceived Cancer-Related Intrusive Thoughts and Avoidance Ratings by Condition and Essay



Note. Error bars represent standard errors.

Tables

Table 6

Demographic Characteristics by Condition

	Condition			
	All (N = 171)	First Person (n = 85)	Generic You (n = 86)	p
Demographics				
Age Mean (*SD*)[a]	19.75 (1.71)	19.69 (1.37)	19.80 (2.00)	.68
Gender Identity *n*(%)[b]				.22
Female	114 (67)	62 (73)	52 (61)	
Male	53 (31)	21 (25)	32 (37)	
Nonbinary	4 (2)	2 (2)	2 (2)	
Race/Ethnicity *n*(%)[b]				.79
Hispanic, Latino, or Spanish	40 (23)	16 (19)	24 (28)	
White	49 (29)	28 (33)	21 (24)	
Asian	46 (27)	23 (27)	23(27)	
Black	9 (5)	4 (5)	5 (6)	
Native American/Alaskan Native	7 (4)	3 (4)	4 (5)	
Native Hawaiian/Pacific Islander	5 (3)	3 (4)	2 (2)	
Multiracial	15 (9)	8 (9)	7 (8)	

Note. *SD* = standard deviation a = analysis of variance, b = Fisher's exact test.

Table 7

Correlations Among Variables

Variable	*2*	*3*
Psychological Distance	.688***	.104
(2) Universality		.052
(3) Cancer-related Intrusions/Avoidance		

Note. Zero-order correlations (*r*) are presented.

***$p < .01$.

Table 8

Perceived Psychological Distance Regressed on Experimental Condition and Essay

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	31.20 ***	4.18	7.46	**<0.001**	22.95 – 39.45
Condition [Generic You]	8.31 *	4.12	2.02	**0.045**	0.17 – 16.44
Essay [Two]	-2.34	5.06	-0.46	0.644	-12.33 – 7.65
Essay [Three]	-2.60	5.04	-0.52	0.607	-12.56 – 7.36
Observations	171				
R^2 / R^2 adjusted	0.026 / 0.008				

Note. CI = 95% confidence interval; *SE* = standard error. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 9

Perceived Universality Regressed on Experimental Condition and Essay

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	3.73 ***	0.16	23.05	**<0.001**	3.41 – 4.05
Condition [Generic You]	0.32 *	0.16	2.00	**0.047**	0.00 – 0.63
Essay [Two]	-0.04	0.20	-0.18	0.855	-0.42 – 0.35
Essay [Three]	-0.09	0.20	-0.46	0.645	-0.48 – 0.30
Observations	171				
R^2 / R^2 adjusted	0.025 / 0.008				

Note. CI = 95% confidence interval; *SE* = standard error. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 10

Perceived Cancer-Related Intrusive Thoughts and Avoidance Regressed on Experimental Condition and Essay

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	1.88 ***	0.10	18.45	**<0.001**	1.68 – 2.08
Condition [Generic You]	-0.07	0.10	-0.73	0.465	-0.27 – 0.12
Essay [Two]	0.09	0.12	0.71	0.477	-0.16 – 0.33
Essay [Three]	-0.21	0.12	-1.74	0.084	-0.46 – 0.03
Observations	171				
R^2 / R^2 adjusted	0.039 / 0.022				

Note. CI = 95% confidence interval; *SE* = standard error. *$p < .05$, **$p < .01$, ***$p < .001$.

Chapter 4: Combined Expressive Disclosure and Prosocial Writing to Promote Well-Being and Decrease Grief-Related Distress Among Bereaved Emerging Adults: Examining the Roles of Psychological Distancing, Universality, and Generativity (Study 3)

Abstract

Bereaved adolescents and emerging adults are at risk of developing psychological disorders and complicated grief (Luecken, 2000; Schnider et al., 2007; Servaty-Seib & Hamilton, 2006). Clinical grief interventions and conventional wisdom reflect an implicit assumption that expressing one's feelings surrounding a loss (i.e., emotional disclosure) facilitates psychological adjustment (Neimeyer & Sands, 2011). However, studies of emotional disclosure have yielded null results in samples of bereaved individuals (Stroebe et al., 2006). The present study investigated the efficacy of a three-session writing intervention combining elements of expressive disclosure and prosocial writing (i.e., expressive helping) or expressive disclosure alone, as compared with a fact-writing control, to promote psychological distance, a sense of universality, and generativity in bereaved young adults. Primary outcomes were well-being and grief-related distress, which were assessed at baseline, post-intervention, and at 1-month and 2-month follow-ups. Recruited from Prolific (an online platform for recruiting research participants) and the University of California, Los Angeles (UCLA) undergraduate psychology subject pool, participants (N = 178; M_{age} = 21.74 years; range = 18–25 years) who had experienced a close other's death from 6 months to 5 years previously and reported being distressed about the loss were randomly assigned to one of three conditions: expressive disclosure, expressive helping, or a fact-writing control. Screening for eligibility was conducted by phone; otherwise, the procedures and assessments were conducted online. The results indicated that participants in the expressive helping condition (but not the expressive disclosure

condition) showed statistically significant improvements in well-being and declines in grief-related distress from baseline to the 2-month follow-up compared to participants in the control condition. Mediation analyses demonstrated that greater psychological distance and feelings of universality partially mediated the relationship between the expressive helping condition and increases in well-being and fully mediated decreases in grief-related distress. Higher generativity partially mediated increases in well-being and decreases in grief-related distress. This study highlights the potential benefits of the expressive helping intervention, in which bereaved individuals process and express their grief-related thoughts and feelings and then provide support for a recently bereaved young adult, for promoting psychological adjustment and reducing grief-related distress in bereaved young adults.

Combined Expressive Disclosure and Prosocial Writing to Promote Well-Being and Decrease Psychological Distress Among Bereaved Emerging Adults: Examining the Roles of Psychological Distancing, Universality, and Generativity

The loss of a loved one is a painful experience that can increase the risk of psychological and physical illness (Guldin et al., 2017; Parkes, 1972; Stroebe & Stroebe, 1987; Thimm et al., 2020). Grief research has focused primarily on young children's loss of a parent, parents' loss of a child, and middle-aged and older adults' loss of an intimate partner; however, emerging adults report relatively high rates of recent loss (Balk et al., 2010; Hardison et al., 2005) and limited sources of support when losses occur (Servaty-Seib & Taub, 2010; Taub & Servaty-Seib, 2008). The emotional, physical, and mental health consequences of interpersonal loss may be particularly profound among adolescents and emerging adults (Balk et al., 2010; Fisher et al., 1985; Kaplow et al., 2013; Stroebe et al., 2007). In a national survey of bereaved youth, 41% of respondents reported coping with a loved one's death in a manner they considered physically, emotionally, or psychologically unhealthy (National Alliance for Grieving Children, 2012). Moreover, research has demonstrated bereaved youth and emerging adults are at risk of developing psychological disorders such as clinical depression (Parkes, 1972, 1986; Stroebe & Stroebe, 1987) and complicated grief (Schnider et al., 2007). Research is thus warranted to better address the needs of the at-risk group of bereaved emerging adults. The present study examines the effects of particular forms of emotional disclosure on relevant psychological and physical health outcomes in a sample of young adults who have experienced the loss of a loved one during adolescence or emerging adulthood.

Bereavement-Related Emotional Disclosure

Conventional wisdom suggests sharing and expressing one's feelings surrounding a loss represents a critical step toward recovery. A leading grief expert, David Kessler (2019), described the importance of shared loss experiences in *Finding Meaning, the Sixth Stage of Grief*:

> Something profound happens when others see and hear and acknowledge our grief. Mourning is the outward expression of our grief. Conversely, something goes wrong when it remains unseen. . . . [W]hen someone decides not to have a funeral, they're missing out. A funeral is the time for people to gather as a family, as a community, to witness grief together. The funeral [is a] ceremony that creates meaning out of our loved one's experience of life, and our own experience of loss. (p. 44)

Accordingly, clinical interventions for bereavement often involve expressing one's bereavement-related experiences and feelings (e.g., Furnes & Dysvik, 2010; Neimeyer et al., 2009; Rynearson, 2006; Shear et al., 2005). Theoretically, disclosing one's grief is thought to aid in emotional processing and meaning-making—the process of making sense of a challenging or traumatic experience such as the death of a loved one (Harvey et al., 2001). Researchers have suggested engaging in meaning-making facilitates the reconstruction of one's understanding of life without the deceased individual (Greenstein & Breitbart, 2000) and therefore represents an essential component of healing and adaptation following loss (Neimeyer & Sands, 2011). As such, interventions that aim to aid in emotional expression are presumed to encourage adjustment to interpersonal loss. However, findings from various studies examining the relationship between emotional expression and bereavement-related outcomes have been mixed and often rely on heterogeneous methods to measure and manipulate emotional expression (e.g., Bower et al.,

2003; Kovac & Range, 2000; O'Connor et al., 2005; Range et al., 2000; Stroebe et al., 2002), indicating a need for additional research.

Pennebaker's expressive disclosure paradigm offers a controlled experimental protocol to examine the effects of emotional expression on subsequent health and well-being in individuals coping with traumatic and stressful experiences (Pennebaker & Beall, 1986). Developed to investigate the impact of emotional processing and expression on psychological and physical health among individuals experiencing stressful life events, the expressive disclosure paradigm typically involves prompting participants to write expressively about a stressful or traumatic experience across several sessions (Pennebaker & Beall, 1986). Numerous studies have evaluated Pennebaker's expressive disclosure paradigm using various methodologic modifications (e.g., number of writing sessions, writing topic, perspective-taking) and outcome variables (e.g., depressive symptoms, physician visits, immune parameters) in both clinical and nonclinical populations (e.g., Gidron et al., 1996; Kliewer et al., 2011; Lepore, 1997; Lepore & Greenberg, 2002).

Meta-analyses and reviews indicate beneficial effects of written expressive disclosure relative to control conditions among various populations (for reviews, see Frattaroli, 2006; Pennebaker & Seagal, 1999; Sloan & Marx, 2004; Smyth, 1998). The results from a meta-analysis of 146 published, randomized expressive disclosure experiments indicate a small but statistically significant overall mean effect size ($r = 0.075$; Frattaroli, 2006). Outcome variables were grouped into six categories, including psychological health (e.g., depressive symptoms, anxiety symptoms), reported health (e.g., physical symptoms, number of doctor's visits), health behaviors (e.g., eating behaviors, medication adherence), general functioning (e.g., academic, occupational, interpersonal relationships), and subjective impact of the intervention (e.g., ratings

of study enjoyment, perceived effectiveness of disclosure). With the exception of health behaviors, all effect sizes were significant for expressive disclosure versus a control condition.

In contrast with the well-documented, positive effects of expressive disclosure on health and well-being in populations experiencing a variety of stressors, expressive disclosure studies have repeatedly yielded null results in samples of bereaved individuals (Bower et al., 2003; Kovac & Range, 2000; O'Connor et al., 2005; Range et al., 2000; Stroebe et al., 2002, 2006). However, dismissing disclosure as an effective intervention for the bereaved may be premature, owing to numerous methodologic issues that may have obscured the effects. Specifically, research regarding disclosure among bereaved individuals has suffered from a lack of control groups, heterogeneity of outcome measures limiting comparison to previous expressive disclosure studies, and failure to measure hypothesized processes that facilitate effective coping and positive adaptation. High attrition rates and low adherence to instructions have also been observed (Lichtenthal & Cruess, 2010; Stockton et al., 2014; Van der Houwen et al., 2010). The present study addresses these shortcomings and examines a novel manipulation theorized to strengthen expressive disclosure's effects.

Self-Reflection

The general literature on self-reflection offers insight into creating maximally effective expressive disclosure. Psychologists have long been interested in the factors that promote adaptive (versus maladaptive) self-reflection (Bushman, 2002; Nolen-Hoeksema et al., 2008; Ochsner & Gross, 2008; Wilson & Gilbert, 2008). Although some research has suggested that reflecting on and developing an understanding of one's emotional experience can result in positive adjustment to stressful experiences (Carver & Scheier, 1998; Martin & Tesser, 1996; Pennebaker & Graybeal, 2001; Smith & Alloy, 2009; Smyth, 1998; Wilson & Gilbert, 2008),

other work has demonstrated that these efforts can result in a ruminative thought process that exacerbates negative emotions (Mor & Winquist, 2002; Nolen-Hoeksema et al., 2008; Smith & Alloy, 2009).

Research aiming to dissociate the factors that facilitate or thwart adaptive self-reflection has suggested outcomes might depend on the degree of focus on the emotionally salient versus contextual details of an experience (Kross & Ayduk, 2011, 2017; Rude et al., 2011; Schartau et al., 2009). More specifically, recounting experiences by focusing on emotionally salient details has been linked consistently with maladaptive outcomes, including increased negative emotional and physiological reactivity (Bushman, 2002; Glynn et al., 2002; Kross & Ayduk, 2008). However, reconstruing an experience (i.e., focusing on the broader, more contextual details) tends to result in more adaptive outcomes, such as reduced emotional and physiological reactivity and increased feelings of closure (Ayduk & Kross, 2010; Gruber et al., 2009). Moreover, emotional regulation studies have demonstrated reappraisal is more effective than other strategies (e.g., suppression, physiological grounding) at producing lower emotional reactivity (Gross, 1998; Rude et al., 2011; Schartau et al., 2009). Therefore, the results of expressive disclosure may depend on the content of one's writing as it relates to the degree of recounting versus reappraisal included in essays.

Indirect evidence from expressive disclosure studies supports the hypothesis that the effects of expressive disclosure on mental and physical health may be moderated by the processes of recounting versus reappraisal during writing. For example, research that has examined writing prompts theoretically designed to strengthen the impact of expressive disclosure in which participants are led to consider the broader context of the stressor via encouragement to find benefit in the stressful experience supports these findings (e.g., Harvey et

al., 2019; Lichtenthal & Cruess, 2010; Lovell et al., 2016; Low et al., 2006). Specifically, regarding grief, one study compared two writing prompts designed to elicit benefit-finding or sense-making to the traditional expressive disclosure prompt and a control writing prompt (Lichtenthal & Cruess, 2010). Notably, all active writing conditions reduced prolonged grief disorder symptoms compared with the control condition. These reductions were most pronounced among participants who responded to the benefit-finding prompt, though the effect was not statistically significant when compared with the other active writing conditions (Lichtenthal & Cruess, 2010). Thus, writing prompts that direct participants to think about their experience of loss in ways that focus on the broader context of the experience (i.e., reappraisal), in addition to traditional writing prompts, may produce positive effects in bereaved populations with regard to prolonged grief disorder symptoms.

Research on the general social sharing of emotions also speaks to the positive effects of reframing negative experiences. In line with self-reflection research, social expressions of emotional content that emphasize emotionally salient content (i.e., the concrete negative aspects of an experience) tend to preserve negative emotionality (Lee et al., 2020; Rimé, 2009; Rose, 2002; Rose et al., 2007). However, when socially prompted via explicit instructions or questions worded to encourage reappraisal of a negative experience, participants have evidenced enhanced emotional recovery (i.e., lower reported emotional impact; Nils & Rimé, 2012), less negative affect, and more feelings of closure as compared to participants socially prompted to simply recount their experience (Lee et al., 2020). These findings indicate the content of emotional expression can influence subsequent affect and suggest the social context of expressive disclosure might be effectively leveraged to encourage disclosure content associated with more adaptive psychological and physical health outcomes.

Social Context of Expressive Disclosure

Although the expressive disclosure paradigm was initially developed and conceptualized as an asocial paradigm (Pennebaker, 1997, 2002), two research groups have noted that the investigator acts as an implicit audience (Brody & Park, 2004; Radcliffe et al., 2007). One study involved an examination of whether the presence or absence of an implicit expressive disclosure audience influences psychological and physical health outcomes by manipulating the privacy of expressive disclosure. Specifically, participants were randomized to one of four conditions: (a) shared writing (writing shared with researchers), (b) unshared writing (writing remaining entirely private), (c) neutral writing control (discussion of recent neutral events), and (d) no-writing control (Radcliffe et al., 2007). At a 3-month follow-up, participants in both the shared and unshared writing conditions exhibited less cognitive intrusion and avoidance than the control groups. However, only participants in the shared writing condition evidenced reductions in physical symptoms, fewer depressive symptoms, and less interpersonal sensitivity than participants in the unshared or control conditions (Radcliffe et al., 2007). These results suggest that, although shared and unshared writing can lead to cognitive benefits, shared writing may lead to additional physical and psychological benefits.

Recognizing the potential influence of the audience for expressive disclosure, other researchers have moved beyond the presence of an implied audience to manipulate the social context of writing. Participants in one such expressive disclosure study who were randomly assigned to share their writing with classmates experienced mental and physical health symptom reductions that surpassed those of participants who shared their writing only with the researchers (MacReady et al., 2011). In addition to psychological and physical health outcomes, experimental research has shown that the intended audience of a person's expressive disclosure

can affect the tone of written content (Brody & Park, 2004; Rodriguez & Kelly, 2006; Williamson et al., 2017). For example, one expressive disclosure study found that Asian American participants who believed their essays would be read by another Asian (vs. non-Asian) person expressed significantly more sadness in their writing (Brody & Park, 2004). In another study, participants were instructed to imagine an accepting or rejecting reader while writing (Rodriguez & Kelly, 2006). Participants in the accepting-audience group reported fewer illnesses 8 weeks after the intervention than did participants in the rejecting-audience condition. These results suggest the expressive disclosure audience can influence written content and the associated benefits.

Prosocial Writing Experiments

To date, two groups of researchers have manipulated the audience and the expressive disclosure instructions to promote a prosocial goal. Rini et al. (2014) examined the effects of prosocial expressive disclosure on subsequent psychological distress and bothersome physical symptoms in a sample of cancer survivors treated with hematopoietic stem cell transplants (SCT). Instructions were manipulated such that participants directed expressive disclosure (a) toward one's personal stressful experience (standard expressive disclosure), (b) toward one's personal experience (writing sessions 1–3) and then toward other adults also experiencing SCT (session 4; expressive helping), and (c) only toward the other similar adults (peer helping), in addition to a fact-writing control (i.e., writing about the factual details of receiving SCT). Although no significant differences between conditions on psychological distress and physical symptoms were detected, participants in the expressive helping condition who reported high cancer-related distress (i.e., moderate to severe survivorship problems), low purpose in life, and low health-related quality of life at baseline evidenced reductions in distress and physical

symptoms compared to the other three conditions. Moreover, a follow-up analysis revealed that the use of more positive words in essay content mediated this relationship (Williamson et al., 2017). The results from Rini et al. (2014) suggest that expressive helping (i.e., expressive disclosure paired with peer helping) was more beneficial than expressive disclosure or peer helping alone among survivors who reported elevated survivorship problems, and the written content of the essays mediated this relationship. These results suggest that the social context of expressive disclosure may influence written content and subsequent mental and physical health. That the peer helping condition was not beneficial suggests that self-reflection via expressive disclosure might be important prior to engaging in prosocial expressive disclosure.

Another writing study manipulated the audience to promote prosocial goals of generativity (i.e., care and concern for younger generations; McAdams & de St. Aubin, 1992) and produced compelling results in a sample of older adults (Moieni et al., 2020). Women aged 60 or older were randomly assigned to write about their life experiences and provide support to a member of a younger generation, presumably to be shared with middle-aged adults (generativity condition) or to complete a descriptive writing task that would remain private (control condition; Moieni et al., 2020). Following the 6-week writing intervention, women in the generativity condition who knew their writing would be shared with others evidenced statistically significant increases in social integration, decreases in psychological distress, and increased positive expectations regarding aging in the physical health domain, in addition to reductions in proinflammatory gene expression, compared to individuals in the control condition (Moieni et al., 2020). Notably, the participants who knew their writing would be shared with others also rated the experience as significantly more positive and generative than participants in the control condition (Moieni et al., 2020).

Although generativity has traditionally been studied in older adults (McAdams & de St. Aubin, 1992), more recent research has suggested generativity may be a protective factor among various age groups, such as emerging adults (e.g., Lawford et al., 2005, 2018). These findings echo the established positive health effects of providing support to others (Konrath & Brown, 2013). Moreover, the proposed mechanism of generativity is relevant to the present study in that young adults who have lost a loved one and have the opportunity to provide support to similar individuals who are earlier in their grieving process may engender feelings of generativity comparable to those associated with providing support to younger generations.

Expressive Disclosure of Shared Experiences

Another factor related to the social context of expressive disclosure and generativity is the degree to which the recipient or imagined audience shares a similar experience with the writer. The shared experience of an expressive disclosure audience may be an opportune manipulation to enhance the expressive disclosure experience for a few reasons. First, research suggests that individuals who have encountered profoundly stressful and uncontrollable life events, including interpersonal loss, often report a desire for and benefit from opportunities to "give back" to and support others in similar situations (e.g., Allen et al., 2009; Staub & Vollhardt, 2008; Truong et al., 2011). Related to the construct of generativity, said opportunities are thought to buffer interpersonal and existential difficulties by facilitating feelings of contribution to a community, which may then increase feelings of agency and allow for the establishment of a new and meaningful social role that promotes feelings of purpose (Vollhardt, 2009; Harvey et al., 2001). Additionally, findings from qualitative research suggest that peer helpers who have experience with the same stressor may facilitate the formation of influential

relationships due to their ability to relate to the needs and concerns of supported peers (Whittemore et al., 2000).

Interpersonal Functions of Bereavement-Related Expressive Disclosure

With the exception of the expressive helping studies described above, expressive disclosure research has focused primarily on intrapersonal functions. However, the interpersonal functions of grief narrative disclosure have also been identified. Of importance to the social context of expressive disclosure, expressing one's grief in a social setting may serve interpersonal goals (Baddeley & Singer, 2009). For example, given the inherent interpersonal nature of grief, sharing one's experience with others may provide a sense of connection that buffers against the lost relationship with the deceased. Although the expressive disclosure paradigm does not typically involve interaction, disclosing about a loss to an audience is likely to engender feelings of closeness with the audience because loss tends to be highly emotional (Folkman, 2001; Nolen-Hoeksema, 2001) and often necessitates disclosure of other intimate details, such as personal values (e.g., Marwit & Klass, 1996). Indeed, disclosure is essential to developing and maintaining close relationships (Collins & Miller, 1994; Laurenceau et al., 1998; Reis & Shaver, 1988) and generally results in feelings of mutual amiability (Collins & Miller, 1994). As such, bereaved individuals may find expressive disclosure that leverages the social aspects of the disclosure process (expressive helping) more meaningful than traditional expressive disclosure alone.

Proposed Mediators of Expressive Helping

Psychological Distancing

The observed benefits of expressive disclosure in nonbereaved populations have been attributed to several mechanisms, including psychological distancing (i.e., adopting a less

personal perspective of one's experiences; Park et al., 2016). The rationale supporting psychological distancing as a putative mechanism is twofold: First, writing about the self requires a distinction between the self as the writer and the topic of one's writing (Apgar, 1997; Meier, 2002). Theoretically related to the acceptance and commitment therapy construct "self as context" (Hayes et al., 2006; Teasdale et al., 2002), this separation is thought to promote distance between one's experiencing consciousness and the content of one's expressed thoughts or feelings, leading to a more objective, less emotionally salient perspective (for a review, see Kross & Ayduk, 2017). Second, narrative construction typically involves describing contextual details that may be otherwise glossed over, including other people's perspectives (Labov & Fanshel, 1977). Therefore, expressive disclosure may naturally encourage writers to adopt a less self-immersed and hence psychologically distanced perspective of their experience. The distinction of selves, coupled with contextual emphasis, is likely to result in less affective arousal, less rumination, and greater reappraisal (Libby & Eibach, 2002; Nigro & Neisser, 1983; Robinson & Swanson, 1993).

Findings from a study that measured subjective reports of psychological distance following expressive disclosure suggest that expressive disclosure may encourage the adoption of a distanced perspective (Park et al., 2016). Compared with control conditions (i.e., writing objectively about daily activities, thinking privately about one's emotional experience), expressive disclosure uniquely promoted self-reported distancing up to 6 months after the writing was completed (Park et al., 2016).

In line with these results, Study 1 of the present dissertation also supports psychological distance as a potential mechanism that encourages benefits observed in expressive disclosure studies. More specifically, Study 1 evaluated a linguistic coding scheme designed to capture

indices of psychological distancing in the expressive disclosure of 31 women with metastatic breast cancer who participated in an expressive disclosure experiment (Low et al., 2010). Coded psychological distancing was tested as a predictor of depressive symptoms 3 months after writing, and it was compared against relevant Linguistic Inquiry and Word Count indicators. Analyses revealed a significant relationship between distanced language in expressive disclosure essays and reductions in depressive symptoms at the 3-month follow-up. In Study 2 of the present dissertation, aspects of language captured by the psychological distancing coding scheme were further evaluated by manipulating linguistic features, including pronoun use (i.e., the "generic you" versus first-person pronouns) and verb tense (i.e., indefinite versus present) in essays from the same expressive disclosure study evaluated in Study 1 (Low et al., 2010). After reading the essays, participants rated perceived levels of psychological distance (and universality, described below) reflected in the essays. Essays that were altered to include linguistic features associated with psychological distance were rated as reflecting the writer's greater psychological distance, as compared with the unaltered essays. These findings support the conclusions drawn in Study 1, suggesting that psychological distancing is a potential mechanism for the benefits observed in expressive disclosure studies.

Of importance to the present study, the added interpersonal context of expressive helping may bolster the effects of psychological distancing by encouraging further separation from one's immersed perspective because the presence of an audience is likely to encourage the participant to adopt the perspective of a reader. More specifically, the knowledge that the disclosure will be read and interpreted by another individual may implicitly encourage the writer to consider a third-person perspective (i.e., the reader's perspective) of one's writing, thereby enhancing psychological distance. Given that a reader would benefit from background information that

supports narrative construction, this perspective may further encourage the inclusion of contextual elements that the participant would otherwise overlook and may facilitate a new understanding of the experience within the described perspective.

Universality

As described above, Study 1 of this dissertation provides preliminary support for psychological distancing as one potential pathway through which expressive disclosure may engender benefits. The linguistic coding scheme developed to examine distancing in expressive disclosure essays captures aspects of language demonstrated to reflect distancing (i.e., grammatical tense, pronoun use). However, Study 2 in the present dissertation evaluated whether these linguistic features also reflect a process of normalizing one's experience or feeling connected to others through shared experiences (i.e., universality). For example, research indicates people often use the generic form of the pronoun "you" when writing or talking about adverse events to contextualize their experience beyond the self (Orvell et al., 2017). However, the use of the generic "you" (and related distanced language) may also function to normalize one's experience as shared with others (e.g., "When you get a breast cancer diagnosis, you are terrified"). To examine this hypothesis, participants read expressive disclosure essays from a previous study (Low et al., 2010) that were experimentally manipulated to include language associated with psychological distance and asked to rate the degree to which the essays reflected universality (and psychological distance). Study 2's results revealed the essays that included language associated with psychological distance were also perceived as reflecting more universality, suggesting universality may be an additional process that promotes the benefits observed in expressive disclosure research.

Defined as "similarity to others" or the experience of being "in the same boat" as others, universality holds promise as a valuable feature of expressive helping for bereaved young adults because, as previously described, bereaved young adults lack support and face emotional challenges that may be poorly understood by most of their peers. Universality can reduce feelings of isolation and encourage willingness to express emotions and share personal experiences (Singer, 1983). Moreover, unlike other stressors, the loss of a loved one is experienced by virtually everyone at some point in their lives, making it truly universal.

Evidence that sentiments of universality in expressive disclosure essays may benefit the writers can be drawn from a study that involved manipulating participants' focus during expressive disclosure (Rude et al., 2011). Specifically, college students were randomly assigned to write about a recent experience of social rejection with a focus on either: (a) the broader context of the experience, (b) abstract reasons the event occurred, or (c) the concrete aspects of their experience (Rude et al., 2011). Planned-comparison analyses indicated participants encouraged to consider the broader context of the experience reported lower rumination and marginally lower depressive symptoms 1–2 days after writing than participants encouraged to consider abstract reasons for the event. The authors interpreted these findings as suggestive that thinking about the "big picture" may have enabled participants to view their experience from perspectives outside their current viewpoint (i.e., psychological distance), including situating their experiences as similar to the experiences of other people (i.e., universality).

Initially studied in the context of group therapy, universality has been identified as one of the main therapeutic processes associated with engaging in support groups (Yalom, 1995). In a study that examined sources and benefits of social support for cancer, participants were interviewed about the social support they received from various relationships, including other

cancer patients (Dakof & Taylor, 1990). Regarding other cancer patients, 27% of participants in the study talked about a unique understanding that other cancer patients have because they have shared a similar experience (Dakof & Taylor, 1990). Sharing a similar experience with other cancer patients allows for developing a sense of interconnectedness that serves as a source of social support.

Findings from research examining support groups have also provided indirect evidence that universality is likely to occur following expressive helping and may produce therapeutic effects in writers. A qualitative study of cancer patients participating in a computer-mediated support group identified universality and the instillation of hope and group cohesion as the most prevalent therapeutic factors (Weinberg et al., 1995). Moreover, Finn (1999) found "providing support or empathy" was the most frequent helping mechanism in an online self-help group. Another qualitative study of computer-mediated support group experiences among women diagnosed with breast cancer found some women attributed the benefits of taking part in the group to a gained sense of universality (Shaw et al., 2000). In summary, although the expressive helping paradigm does not offer the opportunity for reciprocal communication that is typical in support groups, the mere social context of the expressive disclosure, along with the knowledge of the shared experience with the potential audience, is likely to generate feelings of universality, which may provide therapeutic benefits by reducing feelings of isolation.

Generativity

Many bereavement support groups and online forums encourage participants to provide social support to their bereaved peers. Research outside the context of grief has documented that giving social support to others is equally or sometimes more beneficial than receiving support (Brown et al., 2003; Schwartz et al., 2003). Theoretical mechanisms for assumed benefits

suggest providing support to peers, like other prosocial acts, may engender feelings of hope and anticipated recovery (for the support provider) and facilitate relevant skill acquisition and social integration (Landers & Zhou, 2011). However, it remains unclear whether providing support for bereaved peers will have similar benefits.

Opportunities to provide support to peers may be relevant among bereaved individuals for several reasons. First, support provision may foster feelings of agency and encourage new social connections that could buffer against the effects of the original interpersonal loss. Moreover, providing social support to others experiencing a similar stressor may facilitate emotional processing by inducing feelings of generativity. Finally, writing about one's own loss-related experience before shifting to thinking about others' loss may normalize the grief experience and engender feelings of universality (Keefe et al., 2002). In sum, peer helping within the grief context presents a promising and, heretofore, unstudied intervention. Given that the vast majority of clinical interventions involve emotional disclosure in interpersonal contexts (e.g., support groups, individual therapy, support forums), examining the interpersonal contexts that facilitate adaptive outcomes warrant additional study.

The Present Study

The limited availability of effective interventions for bereaved young adults underscores the necessity of developing new approaches. Interventions that provide a sense of interpersonal connection through peer support, in addition to opportunities for emotional disclosure, may be well suited to addressing the unique needs of this at-risk group by engendering psychological distance, as well as feelings of universality and generativity. An expressive helping writing intervention that blends aspects of traditional expressive disclosure and prosocial writing was thus developed to address this gap. The present study compares the effect of expressive helping,

standard expressive disclosure, and a fact-writing control condition on well-being and grief-related distress in bereaved young adults.

The expressive helping intervention was developed by incorporating relevant aspects of Rini et al.'s (2014) and Moieni's (2020) interventions. Specifically, the instructions were designed to foster feelings of generativity by emphasizing an opportunity to provide advice and support for someone with a shared experience (Moieni et al., 2020; Rini et al., 2014). In addition, the intervention combines expressive disclosure with peer support provision, consistent with Rini et al.'s (2014) finding that expressive disclosure prior to support provision may be particularly beneficial for individuals with high baseline distress. The instructions were also designed to emphasize the similarity of the writer and intended reader through shared attributes, given research has suggested support providers may benefit more when giving targeted social support than when provided to a diffuse or ambiguous target (Inagaki & Ross, 2018). Moreover, the emphasis on shared experiences and attributes may facilitate greater feelings of social connection (Whittemore et al., 2000), which may be particularly relevant for grieving young adults who often report feeling that their peers do not understand their bereavement experience (Inagaki & Ross, 2018; Servaty-Seib & Taub, 2010; Taub & Servaty-Seib, 2008). Finally, the emphasis on peer mentorship and shared experience has been demonstrated to enhance feelings of meaning and purpose (Arnstein et al., 2002; Schwartz & Sendor, 1999; Sullivan & Sullivan, 1997). In sum, the expressive helping intervention leverages aspects of expressive disclosure, social support provision, and peer mentorship to engender feelings of generativity, which is hypothesized to support well-being and adjustment to bereavement.

Grief-related distress and general well-being were selected as the primary outcome variables. The expressive helping intervention combines emotional expression, social support

provision, and peer mentorship, which have been hypothesized to reduce grief-related distress levels in youth and young adults (Howell et al., 2016; Krohner et al., 2022). As such, grief-related distress was selected to directly evaluate a primary concern for bereaved young adults and examine these intervention components' cumulative impact. Well-being has been assessed in previous prosocial writing interventions (Nelson et al., 2016; Rini et al., 2014) and bereavement research (Liu et al., 2019). Importantly, research has suggested that well-being is associated with the ability to maintain stable levels of psychological and physical functioning, generative experiences, and positive emotions in the face of highly disruptive events, including interpersonal loss (Bisconti et al., 2004; Bonanno, 2004), and can be leveraged to buffer against the impact of negative emotions associated with expected grief reactions (Sandler et al., 2007).

Secondary outcomes include psychological distress (i.e., anxiety and depressive symptoms), physical symptoms (e.g., headache, fatigue), and coping processes. Psychological distress was chosen due to the heightened risk of anxiety and depression among bereaved young adults (Lundberg et al., 2018; Parkes, 1972, 1986; Servaty-Seib & Hamilton, 2006; Stroebe & Stroebe, 1987). Research has suggested ruminative reflection, or the repetitive recounting of bereavement-related events, can exacerbate psychological distress (Nolen-Hoeksema et al., 1997). Given that this intervention aims to promote adaptive ways of reflecting on one's loss experience, it may reduce psychological distress by disrupting ruminative tendencies. Physical symptoms were selected due to research suggesting that grief can manifest as fatigue, insomnia, headaches, and gastrointestinal disturbances (Kowalski et al., 2008; Utz et al., 2012; Zisook et al., 1982), and expressive disclosure may have a positive effect on physical symptoms among individuals experiencing stressful life events (Pennebaker & Beall, 1986). Coping was chosen as a secondary outcome because coping strategies have been proposed to mediate the impact of

traumatic and stressful events on psychological and physical health (Brooks et al., 2019; Matheson et al., 2008; Thompson et al., 2018). Research has further suggested expressive disclosure and reflection that lead to understanding one's feelings may promote the use of adaptive coping strategies in response to stressful life events (Crane et al., 2019; Watkins & Moulds, 2005). Additionally, coping was selected to determine whether the intervention's emotional expression and prosocial components lead to changes in the use of related coping processes (e.g., emotional expression, emotional support).

The theorized mediators of psychological distance, universality, and generativity were also measured to examine mediational relationships. Additionally, participants' subjective experiences of the intervention were assessed to determine the feasibility and acceptability of the intervention.

Specific Aims

Aim 1

Develop and assess the feasibility of an expressive helping intervention for bereaved young adults.

Aim 2

Determine the efficacy of the expressive helping intervention compared to a fact-writing control condition and an expressive disclosure condition on the primary outcomes of well-being and grief-related distress, as well as the secondary outcomes of psychological distress, physical symptoms, and coping processes in a sample of bereaved young adults.

Aim 3

Determine the efficacy of the traditional expressive disclosure intervention compared to a fact- writing control condition on the primary outcomes of well-being and grief-related distress, as

well as the secondary outcomes of psychological distress, physical symptoms, and coping in a sample of bereaved young adults.

Aim 4

Examine hypothesized mediators (i.e., psychological distancing, universality, generativity) of intervention effects on well-being and grief-related distress.

Hypotheses

Primary Outcomes

Hypothesis 1a. Participants in the expressive helping condition will evidence greater increases in well-being and decreases in grief-related distress than participants in the fact-writing control condition.

Hypothesis 1b. Participants in the expressive helping condition will evidence greater increases in well-being and decreases in grief-related distress than participants in the expressive disclosure condition.

Secondary Outcomes

Hypothesis 2a. Participants in the expressive helping condition will evidence greater decreases in psychological distress and physical symptoms than participants in the fact-writing control condition.

Hypothesis 2b. Participants in the expressive helping condition will evidence greater decreases in psychological distress and physical symptoms than participants in the expressive disclosure condition.

Hypothesis 3a. Participants in the expressive helping condition will evidence greater increases in both approach-oriented and emotional approach coping and decreases in avoidance-oriented coping than participants in the fact-writing control condition.

Hypothesis 3b. Participants in the expressive helping condition will evidence greater increases in both approach-oriented and emotional approach coping and decreases in avoidance-oriented coping than participants in the expressive disclosure condition.

Hypothesized Mediators

Hypothesis 4a. Participants in the expressive helping condition will evidence greater increases in psychological distancing, universality, and generativity than participants in the fact-writing control condition.

Hypothesis 4b. Participants in the expressive disclosure condition will evidence greater increases in psychological distancing and universality, but not generativity, than participants in the fact-writing control condition.

Hypothesis 5. Greater self-reported psychological distancing, universality, and sense of generativity at post-intervention will be associated with higher well-being and lower grief-related distress at the 2-month follow-up.

Hypothesis 6. Psychological distance, universality, and generativity will mediate the relationship between the expressive helping condition and increases in well-being and decreases in levels of grief-related distress.

Method

Participants

Participants were recruited through Prolific (i.e., an online platform for recruiting research participants) and the University of California, Los Angeles (UCLA) undergraduate research participant pool. Potential participants were eligible if they (a) were between the ages of 18 and 25 years (young adulthood); (b) had experienced the loss of a loved one of sufficient closeness (i.e., ≥ 5 on a 10-point Likert scale, with 1 being “not at all close” and 10 being “very

close") between 6 months and 5 years previously (i.e., during mid-late adolescence or young adulthood); (c) displayed current moderate to severe distress about the loss (i.e., ≥ 5 on a 10-point Likert scale, with 1 being "no distress at all" and 10 being the "highest possible distress"); (d) felt comfortable writing in English; and (e) had access to the internet and a computer to complete the study procedures. The exclusion criteria included any expression of active psychosis or suicidal ideation.

Procedure

An adapted version of a protocol previously used in a remotely administered expressive disclosure study was used (e.g., Low et al., 2010). Individuals who expressed interest in participating in the study via the UCLA Department of Psychology participant pool or Prolific received a description of the study (including the fact that participants needed to complete a screening interview to determine their eligibility for the study) and a link to schedule a phone screening. During the screening, a research team member reviewed the inclusion and exclusion criteria and administered a brief screening questionnaire to determine eligibility. Those who did not meet the eligibility criteria were informed of their ineligibility, thanked for their interest, and provided with online mental health resources for bereaved young adults (i.e., The Dougy Center: https://www.dougy.org/resources/audience/young-adults and Actively Moving Forward: https://healgrief.org/actively-moving-forward/young-adult-grief). UCLA students were also provided with an optional referral to UCLA Campus Counseling and Psychological Services in case they wanted to discuss their loss experience.

Eligible participants received an initial email that contained a link to the study information sheet. Upon their agreeing to the information in the sheet, an embedded randomization element randomly assigned them to one of three conditions and proceeded to the

baseline questionnaire electronically. Once completed, the online baseline questionnaire was programmed to alert the principal investigator of potential suicide risk, as indicated by an item on the Traumatic-Grief Inventory Self-Report version (TGI-SR; Boelen et al., 2017). Participants scoring a four or higher on the TGI-SR item indicating "I experienced a desire to die in order to be with the deceased" were considered at risk. In the event of suicide risk, the principal investigator was to contact the participant to discontinue the study and determine appropriate next steps (e.g., community referral, contacting the authorities). However, no participants indicated imminent suicide risk throughout the duration of the present study.

After completing the baseline questionnaire, participants were emailed a link to the first writing activity, which they were instructed to complete within 1 week of finishing the baseline measures (see Measures section). All writing activities included general instructions for completing these activities, followed by instructions and session-specific prompts corresponding to participants' respective conditions: (a) *expressive disclosure* (participants write their deepest thoughts and feelings regarding their loss experience, as is common in expressive disclosure research; Pennebaker & Beall, 1986); (b) *expressive helping* (participants write their deepest thoughts and feelings regarding their loss experience, then, in the last writing session, provide support to others who have recently experienced the loss of a loved one); and (c) *fact-writing control* (participants write objectively about different time frames of their lives).

Participants received individual links to each remaining writing session via email 5 days after completing the prior session. After participants completed the final writing session, they received an email containing the link to the post-intervention survey, which they were asked to complete within 48 hours of completing the final session. Participants received an email containing a link to the 1- and 2-month follow-up surveys 28 days after completing the respective prior study activity.

Reminder emails were sent to participants who had yet to complete each study activity either 48 and 72 hours (baseline survey, 1- and 2-month follow-ups) or 24 and 48 hours (writing sessions, post-intervention survey) after the initial email. A follow-up phone call was made to participants 96 hours (baseline survey, 1- and 2-month follow-ups) or 120 hours (writing sessions, post-intervention survey) after the initial email if the study activity remained incomplete. As an expression of gratitude for taking part, participants received $45 after completing the post-intervention questionnaire. The UCLA Institutional Review Board (IRB#21-001728) approved all study procedures.

Interventions

The benefit of using the traditional expressive disclosure procedure as an active control to isolate the expressive helping intervention's prosocial component motivated the decision to use a writing-based intervention (Pennebaker & Beall, 1986). Additionally, the expressive helping condition was designed to provide both emotional processing and support provision based on the results of a previous study conducted with cancer survivors, which indicated that support provision was more beneficial when survivors were first able to process their experience (Rini et al., 2014).

Participants in the expressive disclosure condition were asked to write about their deepest thoughts and feelings surrounding their loss experience across all three writing sessions. Participants in the expressive helping condition were asked to write about their deepest thoughts and feelings surrounding their loss experience in the first two writing sessions, then to provide advice or support to benefit a newly bereaved young adult during their third and final writing session. They were informed at the first writing session that their third writing session would involve offering advice or support to a newly bereaved young adult. In the fact-writing control condition, participants were asked to provide factual details regarding daily activities (e.g., the previous 24 hours) across all three

writing sessions. See Appendix C for specific instructions and prompts.

Measures

At baseline, post-intervention, and the 1- and 2-month follow-ups, self-report questionnaires were administered to measure primary and secondary outcomes. In addition, participants completed a brief survey immediately following each writing session to capture their subjective experience, including the subjective meaningfulness and difficulty of the writing activity, and their emotional state while writing, rated along both positive and negative dimensions.

Primary Outcomes

Well-Being

Well-being was measured using the 14-item Mental Health Continuum-Short Form (MHC-SF; Keyes, 2002; Lamers et al., 2011). The MHC-SF comprises three subscales that measure (a) hedonic emotional, (b) social, and (b) eudemonic psychological well-being. Hedonic emotional well-being (i.e., feelings of happiness and life satisfaction) was assessed via three items (e.g., "During the past week, how often did you feel happy?"). Social well-being (i.e., feelings of social connectedness and belonging) was assessed via five items (e.g., "During the past week, how often did you feel you belonged to a community or social group?"). Psychological well-being (i.e., feelings of autonomy, self-acceptance, and purpose in life) was assessed via six items (e.g., "During the past week, how often did you feel your life had a sense of direction or meaning to it?"). Items were scored on a 5-point Likert scale (0 = *never*, 5 = *every day*). Higher scores indicate greater well-being. The MHC-SF and its three subscales have been validated in a sample of young adults (Robitschek & Keyes, 2009). In the present sample, the emotional, psychological, social, and total well-being subscales demonstrated high internal

reliability (α range = .83 –.93), and the subscales were highly intercorrelated. Therefore, the total score was used in the analyses.

Grief-Related Distress

Grief-related distress within the previous 2 weeks was measured using the Traumatic-Grief Inventory Self-Report version (TGI-SR; Boelen et al., 2017). The TGI-SR includes 18 items that reflect the criteria for prolonged grief disorder and persistent complex bereavement disorder set forth by the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013) and International Classification of Diseases (World Health Organization, 2018), respectively. Higher scores (range: 18–90) indicate more severe, potentially impairing grief reactions. Internal reliability was excellent across all assessment points in the present sample (baseline α = .92; post-intervention α = .93; 1-month follow-up α = .95; 2-month follow-up α = .95).

Secondary Outcomes

All secondary outcomes were assessed at baseline, immediately after the third writing session, and at the 1- and 2-month follow-ups.

Psychological Distress

Theoretical models suggest depression and anxiety share a common etiology that may result in overlapping symptomatology, including negative affectivity, rumination, and impaired cognitive processing. In healthy samples, anxiety and depression are highly interrelated psychological concepts, as demonstrated by research showing high rates of comorbidity between them. Given this high correlation, they have been conceptualized as reflecting psychological distress (Lovibond & Lovibond, 1995). Previous research in expressive disclosure has examined psychological distress using a composite variable composed of anxiety and depressive symptoms

(Haydon, 2021; Moieni et al., 2020) rather than examining each variable separately. This approach allows for a more holistic representation of psychological distress and protects against conducting repeated analyses on the same dataset, thus reducing the chances of type 1 error. As such, psychological distress was measured by creating a composite of scores from well-validated measures of anxiety (The Patient-Reported Outcomes Measurement Information System (PROMIS) short form measures for anxiety; Pilkonis, 2011) and depressive symptoms (The Center for Epidemiologic Studies – Depression Scale; CES-D; Radloff, 1977). The composite was created by standardizing the scores for the scales at each assessment point and averaging them together.

Depressive Symptoms. The CES-D was developed to measure depressive symptoms in community adult samples (Radloff, 1977). It contains 20 items that assess various aspects of depression, including depressed mood, feelings of guilt or worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Participants rate the frequency of experiencing each symptom (e.g., "I felt depressed" and "I thought my life had been a failure") over the past week using a four-point scale (0 = Rarely or none of the time [less than 1–2 days], 3 = Most or all of the time [5–7 days]). Items are summed to provide a total score that ranges from 0 to 60, with higher scores indicating more significant depressive symptoms. A 16 or greater cutoff score is recommended for identifying individuals at risk for clinical depression (Lewinsohn et al., 1997). The CES-D has demonstrated high internal consistency (Cronbach's $\alpha = 0.85$), concurrent validity, and construct validity. Although it is not recommended as a screening or diagnostic tool for clinical or major depression, it has been shown to detect individual differences in nonclinical populations (Beck et al., 1961; Roberts et al., 1989). The CES-D has also been shown to be reliable and valid for use with young adults

(Radloff, 1991). Internal consistency reliability was excellent in the present sample across all assessment points (baseline α = .91; post-intervention α = .91; 1-month follow-up α = .93; 2-month follow-up α = .93).

Anxiety Symptoms. Symptoms of anxiety over the previous 2 weeks were assessed using the 8-item PROMIS short-form measures for anxiety (Pilkonis, 2011). The scale asks participants to rate how frequently they experienced anxiety symptoms using a 5-point Likert scale (1 = never, 5 = always), with higher scores indicating more significant anxiety. Example items include "I found it hard to focus on anything other than my anxiety" and "I felt tense." The ratings of the eight items can be summed to obtain a total raw score with a potential range of 8–40. Higher scores indicate greater severity of anxiety symptoms. Raw scores may also be converted into a standardized T-score with a mean of 50 and a standard deviation of 10. In the present sample, internal reliability was excellent at all assessment points (baseline α = .93; post-intervention α = .95; 1-month follow-up α = .95; 2-month follow-up α = .95).

Physical Symptoms

Physical symptoms were measured using an adapted checklist of nine physical symptom categories chosen based on factor analysis of a 54-item list (Pennebaker, 1982) developed by King and Emmons (1990). The resulting nine-item checklist has been used in previous research regarding emotional expression (Emmons, 1991; King & Emmons, 1990; Stanton et al., 1994). Participants were asked to indicate the number of days on which they experienced nine categories of physical symptoms (e.g., headache, coughing/sore throat) during the past 2 weeks. Symptom reports were summed to generate a global symptom score for each participant, ranging from 0 to 126. Higher scores indicated more significant symptomatology. Internal consistency

reliability was adequate for research purposes across all assessment points (baseline α = .78; post-intervention α = .81; 1-month follow-up α = .83; 2-month follow-up α = .80).

Coping

Coping processes were measured using three COPE approach-oriented coping subscales (i.e., positive reinterpretation, emotional support, acceptance; Carver et al., 1989), the emotional approach coping scales (i.e., emotional processing, emotional expression; Stanton et al., 2000), and the COPE avoidance-oriented coping subscales (i.e., mental disengagement, denial; Carver et al., 1989; Eisenberg et al., 2012). Each subscale contains four items (28 items total) and assesses coping strategy use. All items assess coping strategy use via a 1 ("*I haven't been doing this at all*") to 4 ("*I've been doing this a lot*") scale. Higher average scores on each subscale (range = 1–4) indicate greater use of the associated coping strategy. The indices were used to assess shifts in coping tendencies following the expressive disclosure intervention. Research has demonstrated that the COPE scales have good internal consistency and construct validity (Carver et al., 1989; Cook & Heppner, 1997; Phelps & Jarvis, 1994), including samples of young adults (Brown et al., 2013; Haden et al., 2007). In the present sample, all subscales demonstrated adequate to excellent internal consistency reliability (Cronbach's α range = .76–.94). The composite scores for the approach-oriented, emotional approach, and avoidance-oriented coping scales were computed by averaging the respective coping subscales together.

Subjective Experience of Intervention

To assess participants' subjective experiences of the writing activities, a brief survey was administered immediately after each writing session. The survey items were modeled after those used in previous studies of written disclosure (Bower et al., 2003; Range et al., 2000) and included questions on the meaningfulness of the writing activity and the level of difficulty in

writing about the prompt using a 1 (*not at all*) to 5 (*very much*) Likert scale. Additionally, participants were asked to rate the intensity of negative and positive emotions experienced while writing using a 1 (*not at all*) to 7 (*extremely*) Likert scale.

After completing all three writing sessions, participants rated their overall subjective experience of the intervention by indicating their degree of closure regarding their bereavement. This was assessed using four 7-point Likert scale items that were adapted from previous research regarding an intervention designed to encourage reappraisal and closure related to a stressful experience through emotional disclosure (Lee et al., 2020). Example items included "As I wrote during this study, I had a realization that caused me to think differently about the experience" and "I feel like I could cope with a similar situation better in the future." Additionally, participants rated their agreement with three condition-specific questions regarding the perceived helpfulness of the exercise, their level of comfort in sharing their writing with another bereaved young adult (expressive helping condition) or with the research team (expressive disclosure and control conditions), and the extent to which they self-censored their writing due to the expected readership, using a Likert scale that ranged from 1 (*Not at all*) to 5 (*Extremely*).

Additional Variables

To characterize the sample, participant age, partnered status, and race/ethnicity were recorded. Participants answered questions about their loss, including a description of their relationship to the lost individual (e.g., parent, sibling, friend), the amount of time since the loss, and aspects of the loss (e.g., age of participant when the death occurred, sudden vs. expected). These variables were assessed in relation to condition assignment to ensure successful randomization.

Mediators

Psychological Distance

Participants' experiences of psychological distance were measured using questions previously used in psychological distancing research (Ayduk & Kross, 2010; Libby & Eibach, 2011; Ross & Wilson, 2002). Participants were asked to indicate the extent to which "[they] saw the experiences, thoughts, and emotions" and "how far [they] were from the scene in [their] mind's eye" on a scale ranging from 1 (*through [their] own eyes*) to 7 (*from the perspective of an observer*). Participants were also asked to rate how physically distant the events felt on a scale of 1 (*feels very close*) to 7 (*feels very distant*). Finally, participants rated how temporally distant events felt on a scale of 1 (*feels like yesterday*) to 7 (*feels very long ago*). In the baseline, post-intervention, 1-month follow-up, and 2-month follow-up surveys, the four psychological distancing items were administered following a 1-minute period, during which participants were asked to think about their loss experience. The four items were also administered in reference to participants' experiences while responding to the writing prompts directly following each writing session. Responses to the items were summed to generate a psychological distancing score. Potential scores ranged from 4 to 28, with higher scores indicating greater psychological distance. The items demonstrated adequate to high internal consistency across all assessment points in the present sample (baseline $\alpha = .73$; post-intervention $\alpha = .86$; 1-month follow-up $\alpha = .87$; 2-month follow-up $\alpha = .87$).

Universality

Participants' sense of universality was measured using an adapted version of the subscales from a questionnaire used in research on group therapy and social support groups (i.e., Weinberg et al., 1995; Yalom, 1995). Participants were asked to rate their agreement with three items in relation to others who have experienced interpersonal loss (i.e., "I feel understood and

accepted by other bereaved young adults," "I feel that other bereaved young adults have the same feelings and fears that I do," and "I feel that I'm in the "same boat" as other bereaved young adults.") on a scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores ranged from 3 to 21, with higher scores indicating stronger feelings of universality. The universality items were administered to assess participants' experiences of universality while thinking about their loss experience at baseline, post-intervention, 1-month follow-up, and 2-month follow-up surveys following a 1-min period during which participants were asked to think about their loss experiences. The items were also administered directly following each writing session to assess participants' experiences while responding to the prompts. In other research, the universality subscale has demonstrated excellent reliability (Cronbach's $\alpha = .95$; Weinberg et al., 1995). The items demonstrated high internal consistency reliability across all time points in the present study (baseline $\alpha = .80$; post-intervention $\alpha = .86$; 1-month follow-up $\alpha = .86$; 2-month follow-up $\alpha = .84$).

Generativity

Three items were selected and adapted from the generative achievement subscale of the Generativity Scale (Gruenewald et al., 2015). Participants were asked to rate items assessing current generative achievement for bereaved young adults (i.e., "I feel like I give back to other bereaved young adults," "I feel like I make a difference in the community of bereaved young adults," and "I feel like I am giving back to other bereaved young adults.") at baseline, immediately following the third writing session, and at the 1- and 2-month follow-ups. Items were assessed on a 1 (*disagree strongly*) to 6 (*agree strongly*) scale. Item scores were averaged across each subscale to create measures of generative achievement, with higher scores indicating higher generativity levels. The Generativity Achievement Subscale has high internal reliability

(generative achievement α = .90) and has been used in a previous prosocial writing study (Moieni, 2020). In the present study, the items demonstrated excellent internal consistency reliability across all assessment points (baseline α = .92; post-intervention α = .92; 1-month follow-up α = .91; 2-month follow-up α = .93).

Manipulation Checks

Data collected for manipulation checks were analyzed to verify that writing instructions were followed. Patterns of effects were expected to parallel those found in past research (e.g., Rini et al., 2014). Participants in the expressive disclosure and expressive helping conditions were expected to report that the writing activities were more meaningful and difficult than for participants in the fact-writing control condition. Additionally, participants in the expressive helping condition were expected to score higher on the item assessing whether their writing would help others than participants in the other conditions. In addition, expressive disclosure and expressive helping participants were expected to report significantly more acute distress immediately after writing than fact-writing control participants. To further assess fidelity to experimental instructions, all essays were read by one of two raters who were familiar with the experimental instructions but unaware of condition assignment. Each rater read all of the essays from a subset of participants and matched them to the condition with which the essays most closely aligned.

Analytic Strategy

The study's sample characteristics, including demographic and loss-related variables, were examined using descriptive statistics. A combination of $\chi 2$, Fisher's exact, and one-way ANOVA tests was employed to compare baseline differences in demographic, loss-related, and outcome variables.

In line with the intention-to-treat principle, analyses included data from all available participants. All mixed linear mixed models (LMM) were fit using the **lmer** function in the **lme4** package in R (Bates et al., 2015). Restricted maximum likelihood estimation was used to fit the model, and Satterthwaite's method for *t*-tests was applied for the computation of *p* values. Effect size estimates for fixed effects were calculated using the **eta_squared** function in the **effectsize** package (Lakens, 2013). In addition, the **emmeans** package was used to conduct planned comparisons of interaction terms and simple contrasts, adjusting for familywise error using the Tukey method (Lenth et al., 2021; Tukey, 1949). The overall statistical summary of the repeated measures ANOVA and related effect sizes are reported, followed by relevant main effects (interpreted when no interactions are present), followed by planned comparisons of interaction terms. Finally, simple effects are reported to aid in interpretation of interaction terms.

The effects of the writing session (writing session one, writing session two, writing session three) and condition (fact-writing control, expressive writing, expressive helping) on participants' subjective experience of the intervention were examined by fitting a separate LMM for positive and negative emotions immediately after writing. To account for nesting of repeated measures within participants, a random intercept for participant was included in each model.

To examine the effect of condition and time on each primary and secondary outcome, a LMM was fit for each outcome variable that included the fixed effects of time (baseline, post-intervention, 1-month follow-up, and 2-month follow-up) and condition (fact-writing control, expressive disclosure, and expressive helping), a time by condition interaction term, as well as a random intercept for participant to account for the nesting of repeated measures within individuals.

To test the mediation hypotheses, separate total effects mediation analyses were conducted to examine the relationship between condition assignment, each primary outcome at the 2-month follow-up, and each hypothesized mediating variable at the post-intervention assessment, using the PROCESS macro in IBM SPSS (Hayes, 2012). Condition assignment was evaluated using the multicategorical coding (indicator variable) to estimate the relative indirect and relative direct effects of experimental condition (expressive disclosure: D1; expressive helping: D2) compared with the reference group (i.e., the control condition; see Hayes & Preacher, 2014, for a detailed description of mediation analyses with multicategorical antecedents). Baseline values of the outcome and mediator variables were included as covariates in each model. Path estimates, standard errors, and 95% bias-corrected bootstrap confidence intervals (CI), with 5,000 random samples, were calculated for each hypothesized mediator on each primary outcome.

Results

A total of 225 potential participants completed the phone screening. Eight declined to participate, and 39 were ineligible. The final sample included 178 eligible participants who were randomized to one of the three conditions: expressive disclosure (n = 60), expressive helping (n = 59), or fact-writing control (n = 59). CONSORT diagram included in Figure 5.

The study's sample characteristics, including demographic data and loss-related variables, were examined using descriptive statistics and group comparisons. As Table 11 shows, the groups did not differ significantly in demographic or loss-related characteristics (ps ≥ .05).

The average age of the participants was 21.74 years (SD = 2.18). The majority identified as female (n = 113; 64%), 45 identified as male (25%), and 20 identified as nonbinary (11%). About half of the sample identified as White (52%), followed by Hispanic/Latino (19%), Asian

(13%), Black (7%), and other (10%). The majority of the sample had at least some college education (83%), with 44% indicating "student" as their employment status and 49% indicating "employed part-time" or "employed full time" as their employment status. Regarding income, 23% of the sample reported earning between $30,001 and $60,000 yearly household income, and about half of the remaining sample reported earning less than $30,001 or more than $60,0000.

On average, the participants experienced the loss of a loved one at 19.83 years of age (*SD* = 2.27), with an average of 1.91 years having elapsed since the death (*SD* = 1.48). The most common relationship with the deceased was a grandparent (42%), followed by a parent (23%), and a friend or partner (16%). The majority of the sample described the death of their loved one as natural (79%).

Feasibility and Subjective Experience of the Intervention

Adherence to the intervention was excellent, with all participants completing all three writing sessions and retained at post-intervention. Furthermore, the two independent raters were able to match participants' essays to the experimental condition with 100% accuracy, indicating participants in all conditions adhered to the intervention and followed the instructions as intended.

Of the 178 enrolled participants, 162 completed the 2-month follow-up survey, resulting in a 91% retention rate. With the exception of education status, there were no significant differences regarding demographic or loss-related variables between participants who withdrew or were lost to follow-up, as compared with completers (ps $\geq .05$). Participants who did not complete the study were more likely to report less education (i.e., > 12 years) compared to participants who completed the study $X^2(2, N = 178) = 9.59, p < .05$). There were no significant

differences between completers and noncompleters on any of the outcome variables at baseline ($ps \geq .09$).

At the post-intervention assessment, participants in the expressive disclosure condition rated the writing sessions as more helpful than did participants in the control condition (Control: $M = 2.43$, $SD = 1.28$; ED: $M = 3.70$, $SD = 1.13$, $t(160) = 1.27$, $p < .0001$). On average, participants in the expressive helping condition believed their advice would be helpful to newly bereaved young adults ($M = 3.70$, $SD = 0.85$).

Participants in the control and expressive disclosure conditions reported that, on average, they were comfortable sharing their writing with the research team (Control: $M = 3.70$ $SD = 0.91$; ED: $M = 3.50$, $SD = 1.00$), with no significant difference observed between those conditions ($ps \geq .14$). Participants in the expressive helping condition also reported feeling comfortable sharing their writing with other bereaved young adults, on average (EH: $M = 3.96$, $SD = 0.87$). There were no statistically significant differences in participants' reported decisions to omit details due to the knowledge that others would read their written content across the three conditions ($ps \geq .11$; Control: $M = 1.64$, $SD = 1.06$; ED: $M = 1.39$, $SD = 0.66$; EH: $M = 1.64$, $SD = 0.67$).

Subjective Meaningfulness of Writing Activity

Table 12 presents the means and standard deviations for the different conditions and writing sessions, and Figure 6 depicts the estimated marginal means for ratings of meaningfulness of writing across writing sessions. The main effect of time on subjective writing activity meaningfulness was not significant ($F(2, 325.74) = 1.18$, $p = .31$, $\eta p^2 < .01$). There was a significant main effect of condition ($F(2, 166.35) = 144.92$, $p < .0001$, $\eta p^2 = .64$) on subjective meaning derived from the writing activities. Additionally, there was a significant interaction

between time and condition ($F(4, 325.72) = 2.75$, $p < .05$, $\eta p^2 = .03$).

Examination of simple effects of condition within time revealed that, compared with participants in the control condition, the subjective meaningfulness of the first writing session was rated significantly higher by participants in the expressive disclosure ($M_{diff} = –1.67$, $SE = 0.17$, $t(350.44) = –9.93$, $p < .0001$) and expressive helping conditions ($M_{diff} = –2.04$, $SE = 0.17$, $t(350.44) = –12.04$, $p < .0001$). The first writing session was rated as marginally significantly more meaningful by participants in the expressive helping condition as compared with participants in the expressive disclosure condition ($M_{diff} = –0.36$, $SE = 0.17$, $t(350.44) = –2.18$, $p = .08$).

The subjective meaningfulness of the second writing session was rated significantly greater by participants in the expressive disclosure ($M_{diff} = –1.59$, $SE = 0.17$, $t(363.69) = –9.19$, $p < .0001$) and expressive helping conditions ($M_{diff} = –2.03$, $SE = 0.17$, $t(356.51) = –11.88$, $p < .0001$) compared to participants in the control condition. The second writing session was also rated as significantly more meaningful by participants in the expressive helping condition compared with participants in the expressive disclosure condition ($M_{diff} = –0.44$, $SE = 0.17$, $t(358.00) = –2.62$, $p = .02$).

Compared to participants in the control condition, significantly greater meaning following the third writing session was reported by participants in the expressive disclosure ($M_{diff} = –2.01$, $SE = 0.17$, $t(365.90) = –11.61$, $p < .0001$) and expressive helping conditions ($M_{diff} = –2.52$, $SE = 0.17$, $t(358.57) = –14.68$, $p < .0001$). Compared to participants in the expressive disclosure condition, the third writing session was also rated as significantly more meaningful by participants in the expressive helping condition ($M_{diff} = –0.51$, $SE = 0.17$, $t(362.39) = –2.98$, $p < .01$).

The examination of simple effects of time within the conditions revealed a significant decrease in the subjective meaningfulness from the first to third writing sessions ($M_{\Delta} = 0.33$, $SE = 0.13$, $t(331.13) = 2.55$, $p < .05$). No other simple effects of time within the conditions were significant ($ps \geq .13$).

Subjective Difficulty of Writing Activity

Table 12 displays the means and standard deviations for the different conditions and writing sessions. Estimated marginal means for ratings of difficulty of writing across the writing sessions for the three conditions appear in Figure 7. There was no significant main effect of time on subjective difficulty of the writing activity ($F(2, 329.68) = 0.54$, $p = .58$, $\eta^2 < .01$). There was a significant main effect of condition on the subjective difficulty of writing activity ($F(2, 169.46) = 27.81$, $p < .0001$, $\eta p^2 = .25$). The interaction between time and condition was not significant ($F(4, 329.66) = 1.43$, $p = .22$, $\eta p^2 = .02$).

Examination of fixed effects revealed participants in the active writing conditions rated the writing activities to be significantly more difficult than participants in the control condition (ED: $b = 1.23$, $SE = 0.21$, $t(385.11) = 5.85$, $p < .0001$; EH: $b = 0.99$, $SE = 0.21$, $t(385.11) = 4.69$, $p < .0001$).

Positive Emotions After the Writing Sessions

Table 12 provides the means and standard deviations for the three conditions and writing sessions. Figure 8 depicts the estimated marginal means for ratings of positive emotion across the writing sessions for the three conditions. There was a significant main effect of time ($F(2, 326.98) = 14.95$, $p < .0001$, $\eta p^2 = .08$) and condition ($F(2, 166.54) = 5.75$, $p < .01$, $\eta p^2 = .06$) on positive emotions. Additionally, there was a significant interaction between time and condition ($F(4, 326.96) = 18.87$, $p < .0001$, $\eta p^2 = .19$).

Simple effect analyses were conducted to explore the significant interaction between time and condition on positive emotions immediately after each writing session. For the first writing session, participants in the expressive disclosure and expressive helping conditions reported significantly lower levels of positive emotion compared with participants in the control condition (ED: $M_{diff} = 0.89$, $SE = 0.26$, $t(392.45) = 3.48$, $p < .01$; EH: $M_{diff} = 1.04$, $SE = 0.26$, $t(392.45) = 4.05$, $p < .001$). There were no significant differences between the expressive writing and expressive helping conditions ($M_{diff} = 0.15$, $SE = 0.25$, $t(392.45) = 0.59$, $p = .83$).

During the second writing session, participants in the expressive disclosure condition reported significantly lower levels of positive emotions than participants in the control condition ($M_{diff} = 0.76$, $SE = 0.26$, $t(403.38) = 2.88$, $p < .025$); however, no other differences were observed ($ps \geq .27$).

During the third writing session, participants in the expressive helping condition reported significantly higher levels of positive emotions than participants in the expressive disclosure condition ($M_{diff} = 1.48$, $SE = 0.26$, $t(402.69) = 5.70$, $p < .0001$) and control condition ($M_{diff} = -1.37$, $SE = 0.26$, $t(399.37) = 5.25$, $p < .0001$).

Participants in the expressive helping condition also reported significantly more positive emotions during the third writing session, during which participants were instructed to provide advice and support to another bereaved young adult, as compared with their first ($M_{\Delta} = 1.94$, $SE = 0.20$, $t(326.41) = 9.50$, $p < .0001$) and second writing sessions ($M_{\Delta} = 1.51$, $SE = 0.20$, $t(326.41) = 7.40$, $p < .0001$) where they were instructed to write about their thoughts and feelings surrounding their loss experiences.

Negative Emotions After the Writing Sessions

Table 12 presents the means and standard deviations for the three conditions and writing

sessions, and Figure 9 illustrates the estimated marginal means for ratings of negative emotion throughout the writing sessions across the three conditions. There was a significant main effect of time ($F(2, 328.76) = 20.08$, $p < .0001$, $\eta p^2 = .11$) and condition ($F(2, 167.99) = 21.53$, $p < .01$, $\eta p^2 = .20$) on negative emotions. Furthermore, there was a significant interaction between time and condition ($F(4, 328.74) = 10.48$, $p < .0001$, $\eta p^2 = .11$).

To explore the interaction effect, simple effect analyses were conducted. For the first writing session, participants in the expressive disclosure and expressive helping conditions reported significantly higher levels of negative emotions than participants in the control condition (ED: $M_{diff} = 0.96$, $SE = 0.25$, $t(405.80) = 3.86$, $p < .001$; EH: $M_{diff} = 1.63$, $SE = 0.25$, $t(405.80) = 6.55$, $p < .0001$). Furthermore, participants in the expressive helping condition reported significantly more negative emotions than participants in the expressive disclosure condition ($M_{diff} = 0.67$, $SE = 0.25$, $t(405.80) = 2.74$, $p < .025$).

During the second writing session, participants in the expressive disclosure and expressive helping condition reported significantly higher levels of negative emotions than participants in the control condition (ED: $M_{diff} = 1.17$, $SE = 0.26$, $t(415.68) = 4.55$, $p < .0001$; EH: $M_{diff} = 1.25$, $SE = 0.25$, $t(410.38) = 4.93$, $p < .0001$). No differences in reported negative emotion levels were observed between the expressive disclosure and expressive helping conditions ($p = .95$).

During the third writing session, participants in the expressive disclosure condition reported significantly higher levels of negative emotions than participants in the control condition ($M_{diff} = 1.21$, $SE = 0.26$, $t(417.51) = 4.73$, $p < .0001$), and participants in the expressive helping condition ($M_{diff} = 1.02$, $SE = 0.25$, $t(415.18) = 4.06$, $p < .001$). However, no differences in negative emotions were observed between participants in the control and expressive helping

conditions (p = .74).

Negative emotions reported by participants in the expressive helping condition (but not the other two conditions) significantly declined across all writing sessions. The largest reduction occurred from the first writing session, during which they were instructed to write about their thoughts and feelings surrounding their loss experiences, to the third writing session, during which they were asked to provide support to a recently bereaved young adult (M_{Δ} = 1.77, SE = 0.20, t(326.61) = 8.70, p < .0001).

Descriptive Statistics on Outcome Variables at Baseline

As shown in Table 11, groups did not significantly differ on any of the primary and secondary outcome measures at baseline ($ps \geq .05$). On average, participants reported well-being levels similar to participants in other studies with young adults not selected for bereavement (M = 49.50, SD = 12.11; Adamczyk, 2019; Fan et al., 2022; Kamal Uddin et al., 2022). Regarding grief-related distress, 25.28% of the participants had TGI-SR scores at baseline that were above a clinical cutoff suggestive of prolonged grief disorder (i.e., ≥ 59; M = 48.41, SD = 15.49; Boelen et al., 2018). Previous research using the TGI-SR in emerging young adults is limited; however, research using other measures to estimate the prevalence of prolonged grief disorder in bereaved emerging adults yielded lower rates, ranging from 12% to 19% (Al-Gamal et al., 2019; Glickman 2021; Herberman Mash et al., 2013). On average, participants reported symptoms at baseline that surpassed the cutoff suggestive of clinical depression on the CES-D (i.e., ≥ 16; M = 26.69, SD = 11.35) and moderate anxiety on the PROMIS (i.e., ≥ 60; M = 63.29, SD = 7.12). Reported depressive and anxiety symptoms at baseline were comparable to participants in other samples of bereaved emerging adults (Kaplow et al., 2010; Kokou-Kpolou et al., 2020; Lundberg et al., 2018; Schwartz et al., 2018). Participants endorsed experiencing the nine physical symptoms on

an average of 27 days over the prior 2 weeks (M = 26.74, SD = 19.79), indicating they on average experienced multiple physical symptoms over the 2 weeks.

Primary Outcomes

Table 13 displays the means and standard deviations of primary and secondary outcome measures. Table 14 presents the bivariate correlations among primary and secondary outcomes at baseline. Tables 16 and 17 display the results of the multilevel linear model analysis for well-being and grief-related distress, respectively. Table 15 provides beta coefficients, standard errors, p values, and 95% confidence intervals for the time-by-condition interactions. Additionally, Figures 10 and 11 show the estimated marginal means across assessments for well-being and grief-related distress in each condition.

Well-Being

There was a significant main effect of time on well-being (F(3, 484.02) = 13.58, p < .001, ηp^2 = .08). The main effect of condition on well-being was not significant (F(2, 175.64) = 1.52, p = .22, ηp^2 = .02). However, as hypothesized, there was a significant interaction between time and condition (F(6, 484.02) = 5.14, p < .001, ηp^2 = .06).

Hypothesis 1a: Expressive Helping Versus Control

When comparing the expressive helping and control conditions, there was a significant time-by-condition interaction on well-being at the 1-month follow-up (b = 4.24, SE = 1.26, t(485.86) = 3.37, p < .01) and the 2-month follow-up (b = 5.50, SE = 1.26, t(485.86) = 4.37, p < .0001).

Examination of simple effects of time within condition revealed that participants in the expressive helping condition evidenced a significant increase in well-being from baseline to the 1-month follow-up (M_Δ = 4.01, SE = 0.89, t(484.61) = 4.53, p < .0001) and the 2-month follow-

up (M_{Δ} = 6.03, SE = 0.89, t(485.61) = 6.81, p < .0001). In contrast, participants in the control condition did not evidence significant changes in well-being ($ps \geq .35$).

Simple effects of condition at the 1-month and 2-month assessment points revealed that there was no statistically significant difference between well-being levels reported by participants in the expressive helping and control conditions at the 1-month follow-up (M_{diff} = –4.66, SE = 2.36, t(221.28) = –1.97, p = .12). However, at the 2-month follow-up, participants in the expressive helping condition reported significantly higher levels of well-being than participants in the control condition (M_{diff} = 5.93, SE = 2.36, t(221.28) = 2.51, p < .05).

Hypothesis 1b: Expressive Helping Versus Expressive Disclosure

When comparing the expressive helping condition to the expressive disclosure condition, the time-by-condition interaction on well-being was significant at the 1-month follow-up (b = 3.74, SE = 1.24, t(484.81) = 3.01, p < .01) and the 2-month follow-up (b = 5.49, SE = 1.25, t(484.86) = 4.40, p < .0001).

Simple effects revealed that participants in the expressive disclosure condition evidenced a significant decrease in well-being from baseline to post-intervention (M_{Δ} = 2.55, SE = 0.87, t(485.02) = 2.92, p < .025). A significant increase in well-being was observed from post-intervention to the 1-month follow-up (M_{Δ} = 2.82, SE = 0.87, t(481.12) = 3.23, p < .01) and the 2-month follow-up (M_{Δ} = 3.09, SE = 0.88, t(481.26) = 3.51, p < .01). However, well-being did not increase significantly from baseline to either follow-up assessment point ($ps \geq .93$).

Additionally, at the 2-month follow-up, participants in the expressive helping condition reported higher levels of well-being than participants in the expressive disclosure condition, but this difference was only marginally significant (M_{diff} = 5.30, SE = 2.35, t(220.00) = 2.25, p = .06).

Grief-Related Distress

There was a significant main effect of time ($F(3, 488.34) = 33.35$, $p < .0001$, $\eta p^2 = .17$) and no significant main effect of condition on grief-related distress ($F(2, 175.10) = 0.43$, $p = 0.65$, $\eta p^2 < .01$). As hypothesized, there was a significant interaction between time and condition ($F(6, 482.44) = 7.35$, $p < .0001$, $\eta p^2 = .08$).

Hypothesis 1a: Expressive Helping Versus Control

When comparing the expressive helping condition to the control condition, the time-by-condition interaction on grief-related distress was only marginally significant at the 1-month follow-up ($b = –2.24$, $SE = 1.04$, $t(483.86) = –2.15$, $p = .08$). However, at the 2-month follow-up, the interaction was statistically significant ($b = –4.33$, $SE = 1.04$, $t(483.86) = –4.15$, $p < .001$).

Examination of the simple effects of time within condition revealed that participants in the expressive helping condition evidenced significant decreases in grief-related distress from baseline to the 1-month follow-up ($M_\Delta = 3.97$, $SE = 0.73$; $t(483.10) = 5.42$, $p < .0001$) and the 2-month follow-up ($M_\Delta = 6.23$, $SE = 0.73$; $t(483.10) = 8.40$, $p < .0001$).

There was a marginally significant decrease in grief-related distress among participants in the control condition from baseline to the 1-month follow-up ($M_\Delta = 1.73$, $SE = 0.75$, $t(484.59) = 2.33$, $p = .09$) and the 2-month follow-up ($M_\Delta = 1.90$, $SE = 0.75$, $t(484.59) = 2.56$, $p = .05$); however, no other simple effects were significant ($ps \geq .30$). There were no significant simple between-condition effects at either follow-up assessments ($ps \geq .14$).

Hypothesis 1b: Expressive Helping Versus Expressive Disclosure

When comparing the expressive disclosure and expressive helping conditions, the time-by-condition interaction with regard to grief-related distress was not significant at the 1-month

follow-up (b = –1.87, SE = 1.03, t(483.23) = –1.82, p = .16), but the interaction was statistically significant at the 2-month follow-up (b = –4.57, SE = 1.03, t(483.26) = –4.43, p < .0001).

Examination of simple effects of time revealed that participants in the expressive helping condition evidenced significant decreases in grief-related distress, as described above. In contrast, participants in the expressive disclosure condition evidenced significant increases in grief-related distress from baseline to post-intervention (M_{Δ} = 2.21, SE = 0.72, t(483.36) = 3.06, p < .025). Compared to baseline, participants in the expressive disclosure condition showed significant decreases in grief-related distress at the 1-month follow-up (M_{Δ} = 2.09, SE = 0.72, t(483.36) = 2.90, p < .025) but not the 2-month follow-up (M_{Δ} = 1.65, SE = 0.73, t(483.41) = 2.28, p = .11).

Secondary Outcomes

Table 13 displays the means and standard deviations of primary and secondary outcome measures; Table 14 shows the bivariate correlations among primary and secondary outcomes at baseline; Table 15 outlines the coefficients, standard errors, p values, and 95% confidence intervals for the time-by-condition interactions; Tables 18 through 22 display the results of multilevel linear model analysis for secondary outcomes; and Figures 12–16 depict the estimated marginal means for secondary outcomes across assessments in each condition.

Psychological Distress

There was no significant main effect of time (F(3, 482.54) = 0.41, p = 0.75, ηp^2 < .01) or condition (F(2, 175.82) = 0.01, p = 0.99, ηp^2 < .01) on psychological distress. However, as hypothesized, there was a significant interaction between time and condition on psychological distress (F(6, 482.52) = 2.75, p < .025, ηp^2 = .03).

Hypothesis 2a: Expressive Helping Versus Control

There were no significant time-by-condition interactions for psychological distress from baseline to either follow-up when comparing the expressive helping and control conditions (*ps* ≥ .94).

Hypothesis 2b: Expressive Helping Versus Expressive Disclosure

When comparing the expressive helping and expressive disclosure conditions, there were no significant time-by-condition interactions on psychological distress from baseline to either follow-up (*p*s ≥ .47).

Post hoc Analysis

To better understand the significant time-by-condition interaction in the overall model, comparisons that were not preplanned were examined. A significant time-by-condition interaction was found between the expressive disclosure and control condition at post-intervention, indicating that participants in the expressive disclosure condition had a larger increase in psychological distress at post-intervention than participants in the control condition ($b = 0.32$, $SE = 0.09$, $t(485.85) = 3.45$, $p < .01$). No other significant effects were found for time or condition.

Examination of simple effects of time within condition revealed that, although participants in the expressive disclosure condition evidenced marginally significant increases in psychological distress from baseline to post-intervention ($M_\Delta = 0.16$, $SE = 0.07$, $t(485.14) = 2.48$, $p = .07$), there was a significant decrease from post-intervention to the 2-month follow-up ($M_\Delta = 0.19$, $SE = 0.07$, $t(481.28) = 2.81$, $p < .05$).

Simple effects indicated that psychological distress did not significantly differ between conditions at any assessment point (*ps* ≥ .46).

Physical Symptoms

The main effect of time on physical symptoms was not significant ($F(3, 483.04) = 0.76$, $p = .52$, $\eta p^2 < .01$). Similarly, the main effect of condition was not significant ($F(2, 176.57) = 0.13$, $p = .88$, $\eta p^2 < .001$). Contrary to hypotheses, the interaction effect between time and condition on physical symptoms was also not significant ($F(6, 482.33) = 1.52$, $p = .17$, $\eta p^2 = .02$).

Hypothesis 2a: Expressive Helping Versus Control

In contrast with Hypothesis 2a, there were no significant time-by-condition interactions at either follow-up for the expressive helping and control condition on physical symptoms ($ps \geq .21$).

Hypothesis 2b: Expressive Helping Versus Expressive Disclosure

Contrary to Hypothesis 2b, no significant time-by-condition interactions were observed for the expressive helping and expressive disclosure conditions on physical symptoms at either follow-up ($ps \geq .25$).

Coping

Emotional Approach Coping

There was a significant main effect of time on emotional approach coping ($F(3, 484.73) = 23.55$, $p < .0001$, $\eta p^2 = .13$). The main effect of condition on emotional approach coping was not significant ($F(2, 173.39) = 2.09$, $p = .13$. $\eta p^2 = .02$). However, as hypothesized, there was a significant time-by-condition interaction ($F(6, 484.72) = 3.30$, $p < .01$, $\eta p^2 = .04$).

Hypothesis 3a: Expressive Helping Versus Control. When comparing the expressive helping and control conditions, there was a marginally significant time-by-condition interaction on emotional approach coping from baseline to the 1-month follow-up ($b = 0.26$, $SE = 0.11$,

$t(490.65) = 2.28$, $p = .06$), and the interaction was significant at the 2-month follow-up ($b = 0.27$, $SE = 0.11$, $t(490.65) = 2.38$, $p < .05$).

Simple effects analysis indicated that participants in the expressive helping condition demonstrated significant increases in emotional approach coping from baseline to post-intervention ($M_\Delta = –0.46$, $SE = 0.08$, $t(487.18) = –5.88$, $p < .0001$), as well as to the 1-month ($M_\Delta = –0.37$, $SE = 0.08$, $t(488.38) = –4.76$, $p < .0001$) and 2-month ($M_\Delta = –0.42$, $SE = 0.08$, $t(488.38) = –5.29$, $p < .0001$) follow-ups. No significant change in emotional approach coping occurred for participants in the control condition ($ps \geq .23$).

Similarly, simple effects of condition revealed that, at post-intervention, participants in the expressive helping condition reported significantly higher levels of emotional approach coping than participants in the control condition ($M_{diff} = –0.36$, $SE = 0.15$, $t(284.05) = –2.50$, $p < .05$).

Hypothesis 3b: Expressive Helping Versus Expressive Disclosure. Contrary to Hypothesis 3b, when comparing the expressive disclosure and expressive helping conditions, there were no significant time-by-condition interactions ($p \geq .53$).

Approach-Oriented Coping

There was a significant main effect of time on approach-oriented coping ($F(3, 482.77) = 17.33$, $p < .0001$, $\eta p^2 = .10$). The main effect of condition on approach coping was not significant ($F(2, 172.85) = 0.83$, $p = .44$, $\eta p^2 < .01$). However, there was a significant interaction between time and condition ($F(6, 482.76) = 2.41$, $p < .05$, $\eta p^2 = .03$).

Hypothesis 3a: Expressive Helping Versus Control. Contrary to Hypothesis 3a, there were no significant time-by-condition interactions for approach-oriented coping from baseline to either follow-up when comparing the expressive disclosure and control condition ($ps \geq .30$).

Hypothesis 3b: Expressive Helping Versus Expressive Disclosure. In contrast with Hypothesis 3b, no significant time-by-condition interactions were observed for participants in the expressive disclosure and expressive helping conditions at either follow-up on approach-oriented coping ($ps \geq .77$).

Post hoc Analysis. To explore the significant overall time-by-condition interaction, unplanned comparisons were conducted. The results revealed a significant time-by-condition interaction between the expressive disclosure and control conditions, as well as between the expressive helping and control conditions at post-intervention. Participants in the expressive disclosure and expressive helping conditions evidenced greater increases in approach-oriented coping at post-intervention (ED: $b = 0.19$, $SE = 0.07$, $t(488.77) = 2.55$, $p < .025$; EH: $b = 0.24$, $SE = 0.07$, $t(488.08) = 3.27$, $p < .01$) compared with participants in the control condition. Additionally, participants in the expressive disclosure and expressive helping conditions showed greater decreases in approach-oriented coping from post-intervention to the 2-month follow-up relative to participants in the control condition (ED: $b = –0.19$, $SE = 0.07$, $t(481.43) = –2.61$, $p < .01$; EH: $b = –0.19$, $SE = 0.07$, $t(481.80) = –2.63$, $p < .01$). No other significant time-by-condition interactions were observed.

Avoidance-Oriented Coping

There was a significant main effect of time on avoidance coping ($F(3, 485.98) = 12.28$, $p < .0001$, $\eta p^2 = .07$). Specifically, across all conditions, there was a marginally significant decrease in avoidance coping from baseline to post-intervention ($b = 0.10$, $SE = 0.06$, $t(494.09) = 1.71$, $p = .09$), as well as to the 1-month follow-up ($b = 0.11$, $SE = 0.06$, $t(494.09) = 1.87$, $p = .06$). Additionally, there was a significant decrease in avoidance coping from baseline to the 2-month follow-up ($b = 0.12$, $SE = 0.06$, $t(494.09) = 2.07$, $p < .05$).

There was no main effect of condition ($F(2, 173.22) = 1.68$, $p < .18$, $\eta p^2 = .02$), and the interaction between time and condition on avoidance-oriented coping was nonsignificant ($F(6, 485.96) = 0.77$, $p < .60$, $\eta p^2 < .01$).

Hypothesis 3a: Expressive Helping Versus Control. Contrary to Hypothesis 3a, there were no significant time-by-condition interactions when comparing the expressive helping and control conditions on avoidance coping at either follow-up (*ps* ≥ .42).

Hypothesis 3b: Expressive Helping Versus Expressive Disclosure. In contrast with Hypothesis 3b, no significant time-by-condition interactions were observed for the expressive helping and expressive disclosure conditions on avoidance coping at either follow-up (*ps* ≥ .77).

Mediational Analyses

Well-Being

Psychological Distance as a Mediator

As shown in Figure 17, and in line with hypotheses, mediation analyses revealed participants in the expressive helping condition (Hypothesis 4a) and the expressive disclosure condition (Hypothesis 4b) reported significantly higher levels of psychological distance at post-intervention than participants in the control condition (ED: $b = 1.70$, $SE = 0.74$, $p < .025$, 95% CI [0.24, 3.17]; EH: $b = 2.77$, $SE = 0.75$, $p < .001$, 95% CI [1.30, 4.25]), over and above the effects of baseline psychological distance and well-being. Aligned with Hypothesis 5, higher levels of post-intervention psychological distance significantly predicted higher levels of well-being at the 2-month follow-up ($b = 0.60$, $SE = 0.12$, $p < .0001$, 95% CI [0.37, 0.84]). The relative total effect of the expressive disclosure condition on well-being at the 2-month follow-up was not significant ($b = 0.11$, $SE = 1.19$, $p = .93$, 95% CI [-2.24, 2.45]). However, the relative total effect of the expressive helping condition was significant ($b = 5.41$, $SE = 1.19$, $p < .0001$, 95% CI [3.06,

7.76]). After accounting for the effects of psychological distance at post-intervention, the relative direct effect of the condition remained nonsignificant for the expressive disclosure condition (b = 0.93, SE = 1.12, p = .41, 95% CI [3.14, 1.29]) and statistically significant for the expressive helping condition (b = 3.73, SE = 1.15, p > .01, 95% CI [1.46, 6.01]). Bootstrap confidence intervals indicated significant relative indirect effects of the expressive disclosure (b = 1.03, SE = 0.48, 95% CI [0.13, 2.01]) and expressive helping (b = 1.67, SE = 0.57, 95% CI [0.69, 2.92]) conditions on well-being at the 2-month follow-up. Accordingly, results partially supported Hypothesis 6, indicating that psychological distance partially mediated the relationship between the expressive helping condition and the increase in well-being at the 2-month follow-up.

Universality as a Mediator

As shown in Figure 18, and aligned with hypotheses, mediation analyses indicated that both the expressive helping (b = 2.24, SE = 0.48, p < .0001, 95% CI [1.29, 3.18]; Hypothesis 4a) and expressive disclosure conditions (b = 1.55, SE = 0.48, p < .01, 95% CI [0.61, 2.49]; Hypothesis 4b) were associated with higher levels of post-intervention universality compared with the control condition over and above the effects of baseline universality and well-being. In line with Hypothesis 5, higher levels of universality at post-intervention significantly predicted greater well-being at the 2-month follow-up (b = 0.77, SE = 0.19, p < .001, 95% CI [0.40, 1.15]). Only the expressive helping condition had a significant total effect on well-being at the 2-month follow-up (ED: b = –0.01, SE = 1.18, p = .99, 95% CI [–2.35, 2.32]; EH: b = 5.41, SE = 1.18, p < .0001, 95% CI [3.07, 7.75]). After adding post-intervention universality to the model, the relative effects of condition remained nonsignificant for the expressive disclosure condition (b = –1.21, SE = 1.17, p = .30, 95% CI [–3.51, 1.09]) and significant for the expressive helping condition (b = 3.68, SE = 1.20, p = .01, 95% CI [1.30, 6.06]). Bootstrap confidence intervals revealed

significant relative indirect effects on follow-up well-being for both experimental conditions (ED: $b = 1.20$, $SE = 0.52$, 95% CI [0.35, 2.39]; EH: $b = 1.73$, $SE = 0.58$, 95% CI [0.76, 3.03]). The results provided partial support for Hypothesis 6, indicating that the relationship between the expressive helping condition and the increase in well-being at the 2-month follow-up was partially mediated by universality.

Generativity as a Mediator

As depicted in Figure 19, mediation analyses indicated that, consistent with Hypothesis 4a, participants in the expressive helping condition reported higher post-intervention generativity levels than participants in the control condition ($b = 1.11$, $SE = 0.43$, $p < .025$, 95% CI [0.26, 1.97]). In line with Hypothesis 4b, participants in the expressive disclosure did not differ significantly from the control condition ($b = 0.63$, $SE = 0.43$, $p = .15$, 95% CI [–0.22,1.48]) in post-intervention generativity over and above the effects of baseline generativity and well-being. Consistent with Hypothesis 5, higher levels of post-intervention generativity were associated with greater 2-month follow-up well-being ($b = 0.61$, $SE = 0.21$, $p < .01$, 95% CI [0.19, 1.04]). The relative total effect of condition on follow-up well-being was significant for the expressive helping condition ($b = 5.44$, SE = 1.19, $p < .0001$, 95% CI [3.09, 7.79]) but not the expressive disclosure condition ($b = 0.11$, $SE = 1.18$, $p = .92$, 95% CI [-2.23, 2.45]). The relative effects of the expressive disclosure condition remained nonsignificant after accounting for post-intervention generativity ($b = –0.27$, $SE = 1.17$, $p = .82$, 95% CI [–2.58, 2.03]), whereas the relative effect of expressive helping remained significant ($b = 4.75$, $SE = 1.19$, $p < .001$, 95% CI [2.41, 7.10]). The relative indirect effects estimated by bootstrap confidence intervals revealed significant effects on follow-up well-being for the expressive helping condition but not for the expressive disclosure condition (ED: $b = 0.39$, $SE = 0.29$, 95% CI [0.24, 0.92]; EH: $b = 0.68$, SE

= 0.33, 95% CI [0.08, 1.37]). Collectively, these results provided partial support for Hypothesis 6, suggesting that generativity partially mediated increases in well-being at the 2-month follow-up among participants in the expressive helping condition.

Grief-Related Distress

Psychological Distance as a Mediator

As shown in Figure 20 and consistent with hypotheses, participants in the expressive helping (Hypothesis 4a) and expressive disclosure (Hypothesis 4b) conditions indicated significantly higher levels of psychological distance at post-intervention compared with participants in the control condition (EH: $b = 2.77$, $SE = 0.75$, $p < .001$, 95% CI [1.30, 4.25]; ED: $b = 1.72$, $SE = 0.75$, $p < .025$, 95% CI [0.24, 3.19]) over and above the effects of baseline psychological distance and grief-related distress. Consistent with Hypothesis 5, higher levels of psychological distance at post-intervention were associated with lower levels of grief-related distress at the 2-month follow-up ($b = –0.77$, $SE = 0.11$, $p < .0001$, 95% CI [–0.98, –0.56]). The relative total effect of condition on follow-up grief-related distress was significant for participants in the expressive helping ($b = –4.10$, $SE = 1.15$, $p < .001$, 95% CI [–6.38, –1.83]), but not the expressive disclosure condition ($b = 0.21$, $SE = 1.15$, $p = .85$, 95% CI [–2.06, 2.48]). After including post-intervention psychological distance in the model, the relative effect of the expressive disclosure condition remained nonsignificant ($b = 1.53$, $SE = 1.02$, $p = .13$, 95% CI [–0.48, 3.54]). The relative effect of the expressive helping condition became nonsignificant ($b = –1.97$, $SE = 1.05$, $p = .06$, 95% CI [–4.04, 0.09]). Bootstrap confidence intervals indicated significant relative indirect effects of both the expressive disclosure ($b = –1.32$, $SE = 0.58$, 95% CI [–2.51, –0.20]) and expressive helping ($b = –2.13$, $SE = 0.58$, 95% CI [–3.37, –1.02]) conditions. These results support Hypothesis 6, indicating that psychological distance fully

mediated the relationship between the expressive helping condition and decreases in grief-related distress at the 2-month follow-up.

Universality as a Mediator

As displayed in Figure 21, and in line with hypotheses, mediation analyses demonstrated that, compared with participants in the control condition, reported post-intervention universality levels were significantly higher among participants in the expressive helping (b = 2.24, SE = 0.48, p < .0001, 95% CI [1.29, 3.19]; Hypothesis 4a) and expressive disclosure conditions (b = 1.59, SE = 0.48, p < .01, 95% CI [0.64, 2.54]; Hypothesis 4b), over and above the effects of baseline universality and grief-related distress. In line with Hypothesis 5, higher levels of post-intervention universality were significantly associated with lower follow-up grief-related distress levels (b = –1.24, SE = 0.17, p < .0001, 95% CI [–1.56, –0.91]). The relative total effect of condition on follow-up grief-related distress was significant for the expressive helping (b = –4.06, SE = 1.16, p < .001, 95% CI [–6.35, –1.78]) but not the expressive disclosure condition (b = 0.16, SE = 1.16, p = .89, 95% CI [–2.12, 2.44]). After accounting for the effects of post-intervention universality, the relative effect of the expressive disclosure condition on follow-up grief-related distress became significant (b = 2.13, SE = 1.03, p < .05, 95% CI [0.10, 4.16]), and the effect of the expressive helping condition became nonsignificant (b = –1.30, SE = 1.06, p = .22, 95% CI [–3.39, 0.80]). Bootstrap confidence intervals indicated significant relative indirect effects on follow-up grief-related distress for both the expressive disclosure (b = –1.97, SE = 0.69, 95% CI [–3.42, –0.69]) and expressive helping (b = –2.77, SE = 0.70, 95% CI [–4.25, –1.54]) conditions. These results support Hypothesis 6, indicating that universality fully mediated the relationship between the expressive helping condition and decreases in grief-related distress at the 2-month follow-up.

Generativity as a Mediator

As shown in Figure 22, and consistent with hypotheses compared with the control condition, participants in the expressive helping condition reported significantly higher levels of post-intervention generativity (b = 1.12, SE = 0.43, p < .025, 95% CI [0.26, 1.98]), over and above the effect of baseline generativity and grief-related distress (Hypothesis 4a). In contrast, the effect of the expressive disclosure condition on post-intervention generativity was nonsignificant (b = 0.67, SE = 0.43, p = .12, 95% CI [–0.18, 1.53]; Hypothesis 4b). Aligned with Hypothesis 5, higher levels of post-intervention generativity were significantly associated with lower levels of follow-up grief-related distress (b = –0.45, SE = 0.21, p < .05, 95% CI [–0.86, –0.05]). The relative total effect of condition on follow-up grief-related distress was significant for the expressive helping (b = –4.16, SE = 1.14, p < .001, 95% CI [–6.40, –1.91]) but not the expressive disclosure condition (b = 0.13, SE = 1.13, p = .91, 95% CI [2.11, 2.37]). After accounting for the effect of post-intervention generativity, the relative effect of the expressive disclosure condition on follow-up grief-related distress remained nonsignificant (b = 0.44, SE = 1.13, p = .70, 95% CI [–1.79, 2.67]). In contrast, the relative effect of the expressive helping condition remained significant (b = –3.65, SE = 1.15, p < .01, 95% CI [–5.92, –1.38]). Bootstrap confidence intervals suggest that the relative indirect effects on follow-up grief-related distress were significant for participants in the expressive helping condition (b = –0.51, SE = 0.30, 95% CI [–1.17, -0.01]) but not in the expressive disclosure condition (b = –0.31, SE = 0.29, 95% CI [–0.97, 0.15]). Collectively, these results partially support Hypothesis 6, indicating that generativity at post-intervention partially mediated the relationship between the expressive helping condition and decreases in grief-related distress at the 2-month follow-up.

Discussion

The first aim of Study 3 was to develop and assess the feasibility of an expressive helping intervention for bereaved young adults. Retention and adherence to the intervention were perfect, in that all participants completed all three writing sessions and were retained at post-intervention. Retention at the 2-month follow-up was 91%. Participants in the expressive helping condition reported high levels of meaning derived from the writing activities and believed their advice would be helpful to newly bereaved young adults. The participants in the expressive disclosure and expressive helping conditions experienced similar levels of positive affect after the first two writing sessions. Although participants in the expressive helping condition reported greater negative affect during the first writing session, negative affect was comparable to participants in the expressive disclosure condition at the second writing session. After the third and final writing session, participants in the expressive helping condition evidenced significantly less negative affect and greater positive affect than participants in the expressive disclosure condition. During this session, participants in the expressive helping condition were instructed to provide advice and support to a newly bereaved young adult, whereas participants in the expressive disclosure condition continued to write about their deepest thoughts and feelings related to their experience of loss. This suggests that providing advice and support to someone in a similar situation after processing one's own feelings can have a positive effect on one's emotional state, even more so than continuing to write about one's deepest thoughts and feelings. Collectively, these findings suggest that the expressive helping intervention was feasible to implement and well-received by participants, representing an important step in the development of effective, easily disseminable interventions for bereaved young adults.

The second aim of Study 3 was to compare the efficacy of the expressive helping intervention to that of traditional expressive disclosure and a fact-writing control task. With regard to the primary outcomes, hypotheses were supported in that participants in the expressive helping condition evidenced greater increases in well-being and greater decreases in grief-related distress compared to participants in the fact-writing control condition (Hypothesis 1a) and expressive disclosure condition (Hypothesis 1b) at the 2-month follow-up. Regarding secondary outcomes, it was hypothesized that participants in the expressive helping condition would show greater decreases in psychological distress and physical symptoms compared with participants in the fact-writing control condition (Hypothesis 2a) and expressive disclosure condition (Hypothesis 2b). However, no significant differences were observed between the expressive helping condition, control, or expressive disclosure conditions in changes in psychological distress and physical symptoms from baseline to the follow-up assessments.

Previous research on expressive writing and prosocial writing interventions has yielded inconsistent results with regard to effects on psychological distress (Kaplow et al., 2010; Lichtenthal & Cruess, 2010; Moieni et al., 2020; Range et al., 2000; Roepke et al., 2018) and physical symptoms (Rini et al., 2013; Roepke et al., 2018; Stroebe et al., 2002). The results from Rini et al.'s (2014) expressive helping intervention indicated that only participants who had high cancer-related distress, low purpose in life, and low health-related quality of life at baseline demonstrated improvements in physical symptoms and psychological distress. Accordingly, it is possible that initial levels of distress and physical symptoms moderate the impact of the expressive helping intervention. The sample size of the present study was not sufficient for testing this question. Another possibility is that the physical, depressive, and anxiety symptoms reported by participants were not directly related to their grief and, therefore, were not

significantly impacted by an intervention that focused on providing grief-related advice and support to others. However, the fact that all outcome variables were highly inter-correlated at baseline does not support this interpretation.

Content and linguistic analysis of expressive disclosure essays have suggested that the content of the writing may influence reductions in psychological distress and physical symptoms (Drake et al., in preparation; Kaplow et al., 2018; Pennebaker et al., 1997). For example, Pennebaker et al. (1997) found that linguistic markers of cognitive change in expressive writing essays with bereaved college students significantly predicted decreased physical symptoms and that use of more negative emotion words than positive words predicted negative outcomes such as physical symptoms. Additionally, examination of language used in bereaved youths' expressive essays revealed that more self-focused language was associated with increased parent-reported psychological distress (Kaplow et al., 2018). Finally, linguistic analysis of expressive helping essays from Rini et al. indicated the use of more positive words in essays mediated improvements in psychological distress (Williamson et al., 2017). Accordingly, the content of the essays in the present study, as indicated via linguistic analysis and the content-coding scheme developed in Study 1, may shed light on the results. These analyses will be conducted for a separate report.

Previous research on prosocial writing interventions that has demonstrated a positive impact on physical symptoms has been conducted with older adults (Moieni et al., 2020) and individuals with chronic illness (i.e., cancer; Rini et al., 2014). Although the present study's presumably healthy, young adult participants on average reported multiple physical symptoms over the 2 weeks, it is possible their physical symptoms were minimal compared to those of participants in the other two studies and less likely to be affected by the expressive helping

intervention. Future research could explore the potential moderating role of age and health status on the effectiveness of prosocial writing interventions for reducing physical symptoms.

It was also hypothesized that participants in the expressive helping condition would evidence greater increases in both emotional approach coping (Stanton et al., 2000) and approach-oriented coping (i.e., positive reinterpretation, emotional support, acceptance; Carver et al., 1989) and decreases in avoidance coping (i.e., mental disengagement, denial; Carver et al., 1989; Eisenberg et al., 2012), compared with participants in the fact-writing control condition (Hypothesis 3a) and expressive disclosure condition (Hypothesis 3b). Partially in line with Hypothesis 3a, there was a significant time-by-condition interaction on emotional approach coping in the hypothesized direction when comparing participants in the expressive helping and control condition at the 2-month follow-up (but not the 1-month follow-up). Although a significant omnibus time-by-condition interaction for approach-oriented coping was found, planned comparisons of interaction terms revealed no significant interaction terms at either follow-up. However, the examination of unplanned pairwise contrasts demonstrated that both experimental conditions produced increases in approach-oriented coping from baseline to post-intervention, which then returned to baseline levels at the 2-month follow-up. The results for avoidance-oriented coping did not support Hypothesis 3a; participants' avoidance-oriented coping decreased in all three conditions from baseline to the 2-month follow-up. The results also did not support Hypothesis 3b, with no significant differences in changes in approach-oriented, emotional approach, or avoidance-oriented coping between participants in the expressive helping condition and the expressive disclosure condition at either follow-up. Overall, the results suggested the expressive helping intervention may have led to increases in coping through emotional approach and short-term (i.e., immediately following the intervention) increases in

other approach-oriented coping processes (i.e., positive reinterpretation, emotional support, acceptance).

The fourth aim of Study 3 was to examine hypothesized mediators (i.e., psychological distancing, universality, generativity) of intervention effects. Accordingly, it was hypothesized that participants in the expressive helping condition would evidence greater increases in psychological distancing, universality, and generativity compared with participants in the fact-writing control condition (Hypothesis 4a). It was further hypothesized that participants in the expressive disclosure condition would evidence greater increases in psychological distancing and universality but not generativity than participants in the control condition (Hypothesis 4b). The results fully supported both hypotheses. The hypothesis that greater self-reported psychological distancing, universality, and sense of generativity at post-intervention would be associated with higher well-being and lower grief-related distress at the 2-month follow-up (Hypothesis 5), controlling for baseline levels of hypothesized mediators and outcome variables, was fully supported. It was further hypothesized that psychological distancing, universality, and generativity would mediate the relationship between the expressive helping condition and increases in well-being and decreases in levels of psychological distress (Hypothesis 6). The mediation results revealed that the effect of the expressive helping condition on well-being at the 2-month follow-up was partially mediated by post-intervention psychological distance, universality, and generativity. Moreover, the effect of the expressive helping condition on follow-up grief-related distress was fully mediated by post-intervention psychological distance and universality and partially mediated by post-intervention generativity. Collectively, these findings partially support Hypothesis 6, suggesting psychological distancing, universality, and

generativity may play a significant role in explaining the relationship between the expressive helping intervention and changes in well-being and grief-related distress.

In sum, the expressive helping intervention led to improved well-being—partially mediated by psychological distancing, universality, and generativity—and reduced grief-related distress—fully mediated by psychological distance, universality, and partially by generativity. These findings indicated that writing expressively about a personal loss prior to offering support to a newly bereaved peer facilitated psychological distancing from one's own grief, cultivated a sense of universality in the bereavement experience, and enhanced a sense of transforming personal grief into beneficial support for others, collectively contributing to enhanced well-being and diminished grief-related distress. Importantly, the positive effects of the expressive helping condition appeared to strengthen over time, becoming more pronounced up to the 2-month follow-up mark. Whether these effects would continue to strengthen, stabilize, or dissipate beyond this point is a question for future research. Conversely, although expressive disclosure enhanced psychological distancing and universality, it did not significantly influence well-being or grief-related distress, which aligns with previous research showing null outcomes for expressive disclosure in the context of grief (Bower et al., 2003; Kovac & Range, 2000; O'Connor et al., 2005; Range et al., 2000; Stroebe et al., 2002, 2006). Given the absence of effect on outcomes, the lack of significant mediation among the expressive disclosure condition, psychological distance, universality, well-being, and grief-related distress should be interpreted with caution. Although the present study did not observe significant effects of expressive disclosure on well-being or grief-related distress, prior research has demonstrated its beneficial effects on other outcomes and in the context of other stressors (e.g., Frattaroli, 2006; Gidron et al., 1996; Kliewer et al., 2011; Lepore, 1997; Lepore & Greenberg, 2002). In these cases, it

remains possible psychological distancing and universality may potentially mediate the relationships between expressive disclosure and positive outcomes.

In light of the partial mediation results observed in this study, one plausible interpretation is that the mediators of psychological distancing, universality, and generativity could collectively exert a mediating effect on the relationship between the expressive helping intervention and changes in well-being and grief-related distress. This suggests a potential interplay and cooperative influence of these variables, which might not be fully detectable when examined individually (i.e., serial mediation). However, it is also important to consider the possibility that other unmeasured mediators may exist and could be contributing to the observed relationships. Such a comprehensive mediation hypothesis, including the potential influence of additional unmeasured mediators, is beyond the statistical power and scope of this present study to definitively test. Consequently, although this interpretation offers an intriguing direction for future research, it remains speculative. Future studies, with designs specifically powered to assess complex, multivariate mediation effects and potential unmeasured mediators, is needed to adequately address, investigate, and validate the possibility of serial mediation.

Strengths and Limitations

Despite the promising results, this study has several limitations exist. First, the sample's reliance on Prolific participants and undergraduates is noteworthy. Although recent research has demonstrated that Prolific participants and undergraduate students can provide data that reflect high levels of attention, comprehension, honesty, and reliability (Eyal et al., 2021; Stanton et al., 2022), the present results should be generalized with caution. Second, the sample had considerable diversity with regard to bereavement characteristics (e.g., number of years elapsed since the loss, relationship with the deceased). Because the literature has documented that

reactions to losses differ based on loss characteristics, future research could examine loss characteristics (e.g., manner of death, relation to deceased) as potential moderators of outcomes. For example, bereaved individuals are more likely to experience prolonged grief in response to losses of close family members, losses that are sudden (Ball, 1977; Cleiren, 1993; Stroebe et al., 1993), and losses considered "untimely" (Miles & Perry, 1985) or violent (Parkes, 1996; Rando, 1993) compared to losses due to natural causes (e.g., old age). As such, individuals who have experienced different types of loss may have different needs, introducing variability with regard to the impact of the intervention. Third, the potentially moderating role of culture was not addressed in the present study, presenting a significant limitation to the generalizability of the results. Culture has been demonstrated to influence how individuals perceive and express grief, the meaning they assign to loss, and the available social support systems they rely on (Parkes et al., 2015; Rosenblatt, 1988; Stroebe & Schut,1998). Moreover, cultural variations in norms surrounding emotional expression and help-seeking behaviors may influence the effectiveness and acceptability of peer-support interventions. Future research could explicitly examine the influence of culture on the effects of expressive helping by comparing the effects of the intervention across different cultural groups or conducting culturally specific adaptations to ensure the intervention's relevance and effectiveness for diverse populations.

The present study also possesses significant strengths. First, the sample was more diverse in terms of gender identity, ethnicity, and income than those of previous studies of writing interventions with bereaved young adults (e.g., Campbell & Pennebaker, 2003; Kovac & Range, 2000; Kuiken et al., 2008; Lichtenthal & Cruess, 2010; Pennebaker & Francis, 1996; Pennebaker et al., 1988, 1990; Range et al., 2000), which have often relied predominantly on female college students. The diversity of the sample allows for greater potential generalizability of the findings.

In comparison with other studies with bereaved young adults, the present study had a notably lower attrition rate than has been reported in previous research (Kovac & Range, 2000; Lichtenthal & Cruess, 2010; Pennebaker & Francis, 1996; Pennebaker et al., 1990; Range et al., 2000), in which reported high rates of attrition occurred, ranging from 25% to 51.5%. This low attrition rate suggests that the participants were engaged in and committed to the study, which may enhance the validity of the findings and reduce the risk of selection bias. The use of an innovative writing intervention (Moieni et al., 2020; Rini et al., 2014) designed to address the interpersonal contexts of expressive disclosure among bereaved young adults, coupled with a randomized controlled design, are notable strengths in that they allowed for a rigorous examination of the effectiveness of the intervention. Moreover, the examination of mediators provided a more in-depth exploration of the mechanisms through which the intervention may have had an impact on the outcomes.

Although the beneficial effects of expressive disclosure have been documented for decades, research using the paradigm in samples of bereaved individuals has repeatedly failed to demonstrate benefits (Bower et al., 2003; Kovac & Range, 2000; O'Connor et al., 2005; Range et al., 2000; Stroebe et al., 2002, 2006). Identifying the mechanisms that facilitate these effects is crucial for the development of and clinical implementation of other forms of expressive disclosure in a maximally effective way. Moreover, these findings can inform the development of new, more effective approaches to expressive disclosure and clinical interventions aimed at promoting adaptive disclosure and self-reflection through the promotion of psychological distance, universality, and generativity. For example, the expressive helping intervention may benefit from the inclusion of social feedback, which has been demonstrated to be an impactful aspect of constructs related to generativity in prior research (i.e., prosocial acts; Chancellor et al.,

2018). Therefore, integrating feedback into the intervention may further enhance the expressive helping interventions' efficacy and should be considered in future research.

The use of online prosocial opportunities for bereaved young adults is critically important—particularly in the wake of the COVID-19 pandemic—which has made it challenging to access in-person support and services. Online interventions that allow bereaved young adults to support and connect with one another remotely could be a valuable source of emotional and practical support. Participants in the expressive helping condition provided exclusively positive feedback during debriefing, often thanking the experimenter for the potential to give back to others with similar experiences and praising the accessibility of the intervention. This positive response, coupled with the low attrition rates and high levels of reported meaning derived from the expressive helping essays, suggests that online prosocial interventions are a promising alternative to in-person support, even beyond the pandemic.

Given the expressive helping intervention's emphasis on peer support in addition to expressive disclosure, these findings are well-positioned to connect with the burgeoning research on the utility of highly disseminable social networking interventions (Cheng et al., 2020; Elaheebocus et al., 2018; Kazerooni et al., 2020; Naslund, 2016). Relatedly, the development of peer-supported online expressive helping group interventions holds promise for improving well-being and decreasing grief-related distress in bereaved young adults. By capitalizing on the power of social networking platforms, peer-supported expressive disclosure interventions can leverage the potential of online communities and networks to foster enhanced peer connections. Furthermore, the scalability and potential for wide dissemination offered by online platforms make these interventions accessible to a large number of bereaved young adults, who may otherwise face barriers to seeking and providing traditional in-person support. The low-cost,

convenience, and anonymity provided by online environments may particularly appeal to individuals who are hesitant to engage in face-to-face settings or who have limited access to local support services. As rigorous trials accumulate, expressive helping holds considerable promise as an evidence-supported intervention in the context of grief and other profound stressors.

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Figures

Figure 5

CONSORT Diagram

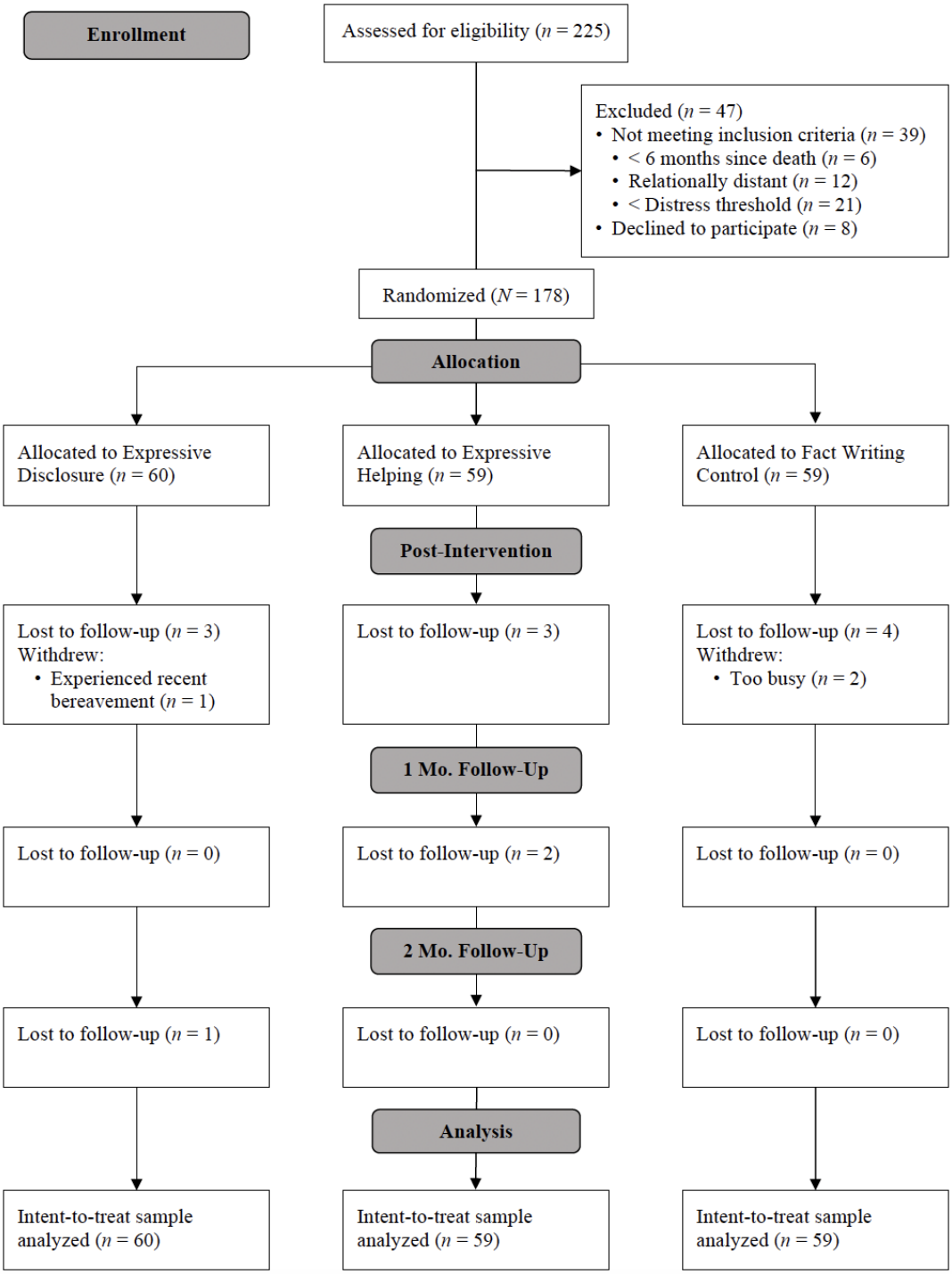
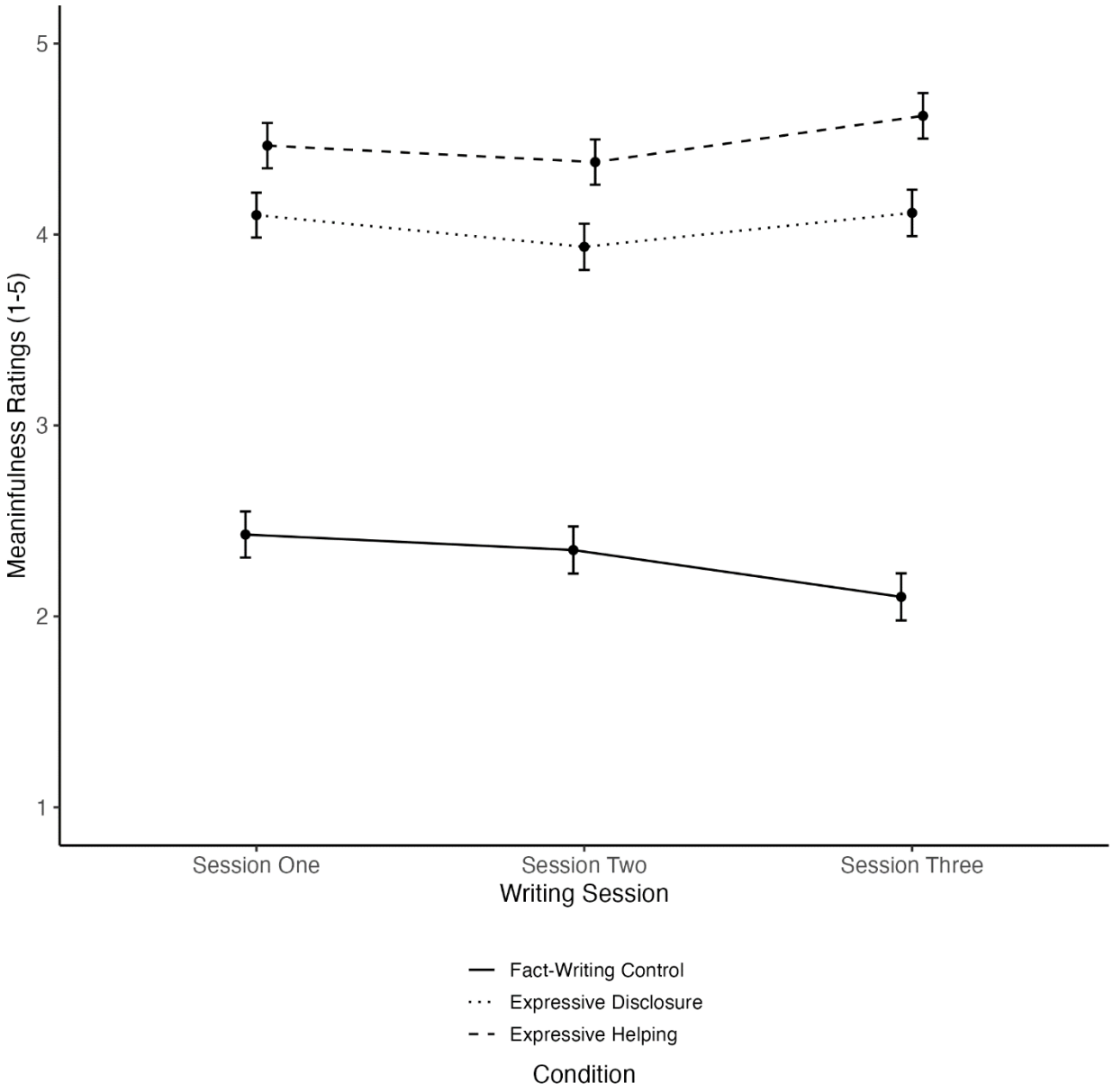


Figure 6

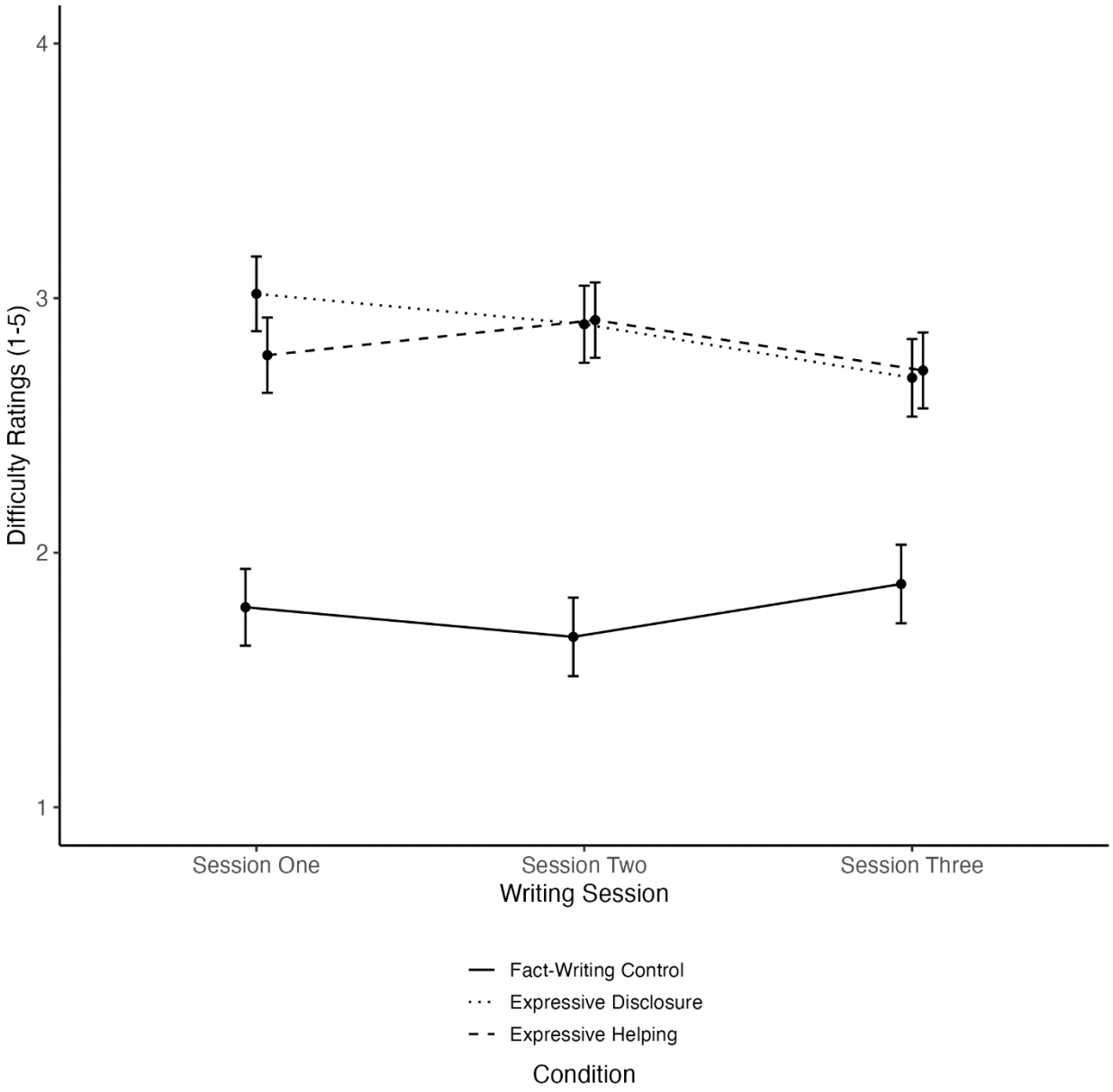
Estimated Marginal Means for Ratings of Meaningfulness of Writing Across Writing Sessions



Note. Error bars represent standard errors of the means. Participants in the expressive disclosure and expressive helping conditions showed higher ratings of meaning than participants in the fact-writing control condition across all writing sessions. Participants in the expressive helping condition also rated the writing sessions as more meaningful relative to participants in the expressive disclosure condition across all writing sessions.

Figure 7

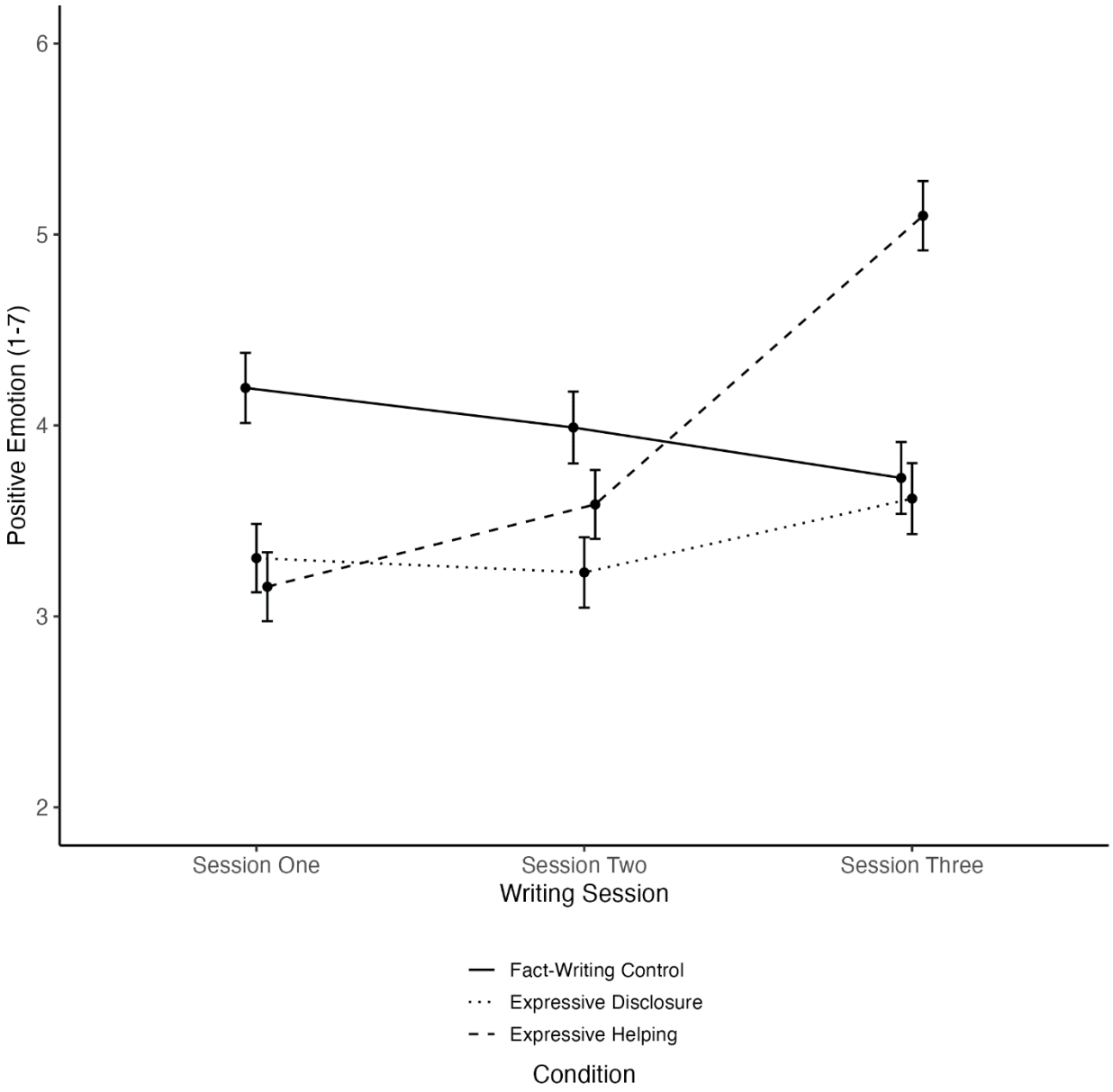
Estimated Marginal Means for Ratings of Difficulty of Writing Across Writing Sessions



Note. Error bars represent standard errors of the means. Participants in the expressive disclosure and expressive helping conditions rated the writing sessions as significantly more difficult than participants in the fact-writing control condition across all writing sessions. There were no significant differences between the difficulty ratings of the participants in the expressive helping and expressive disclosure conditions in any writing session.

Figure 8

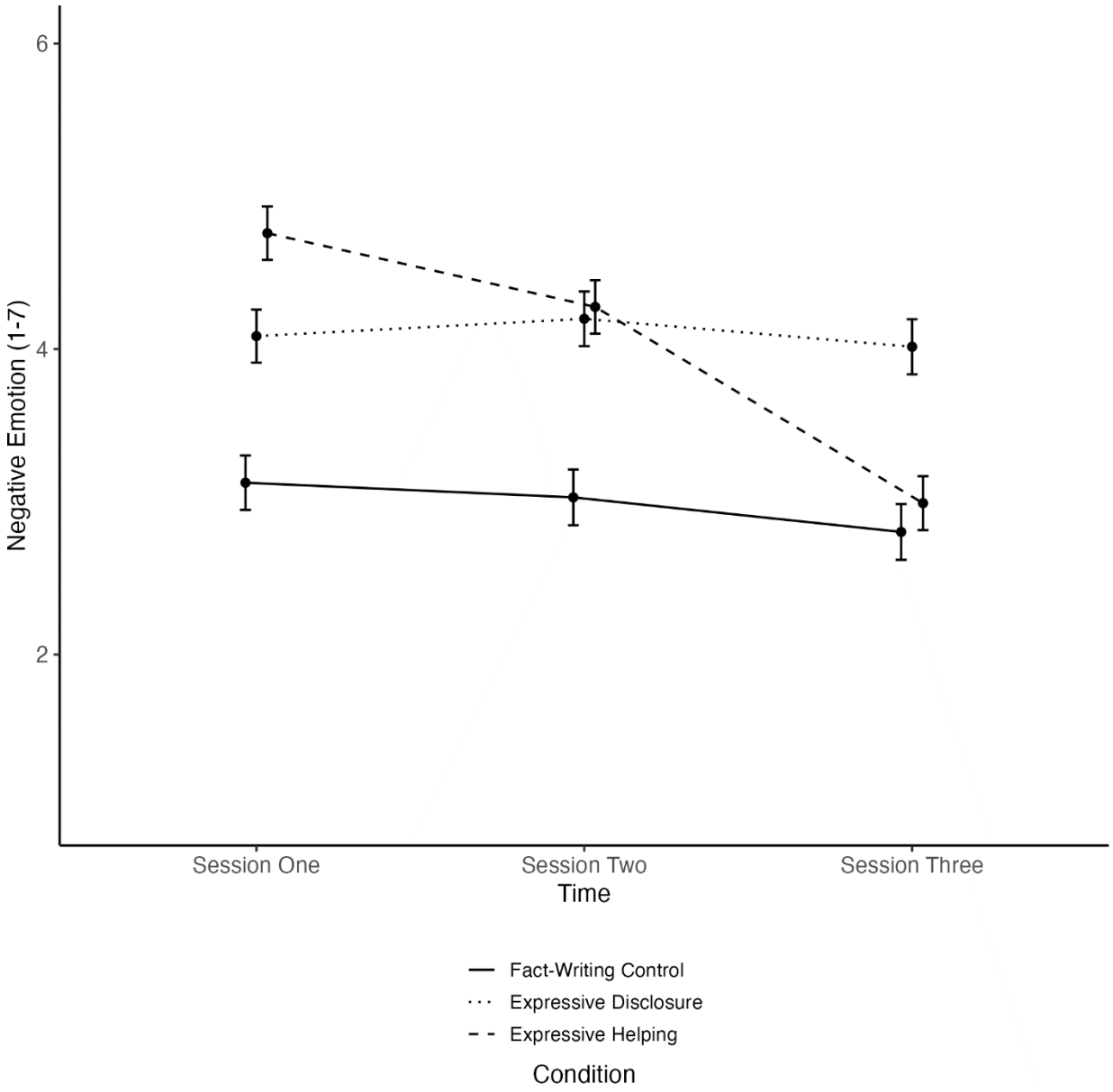
Estimated Marginal Means for Ratings of Positive Emotion Across Writing Sessions



Note. Error bars represent standard errors of the means. Following the initial writing session, participants in the expressive disclosure and expressive helping conditions reported fewer positive emotions than participants in the control condition. After the second session, only participants in the expressive disclosure condition reported fewer positive emotions than the participants in the control condition. Participants in the expressive helping condition reported significantly higher positive emotions than both other conditions after the third writing session, during which they provided support to another bereaved young adult.

Figure 9

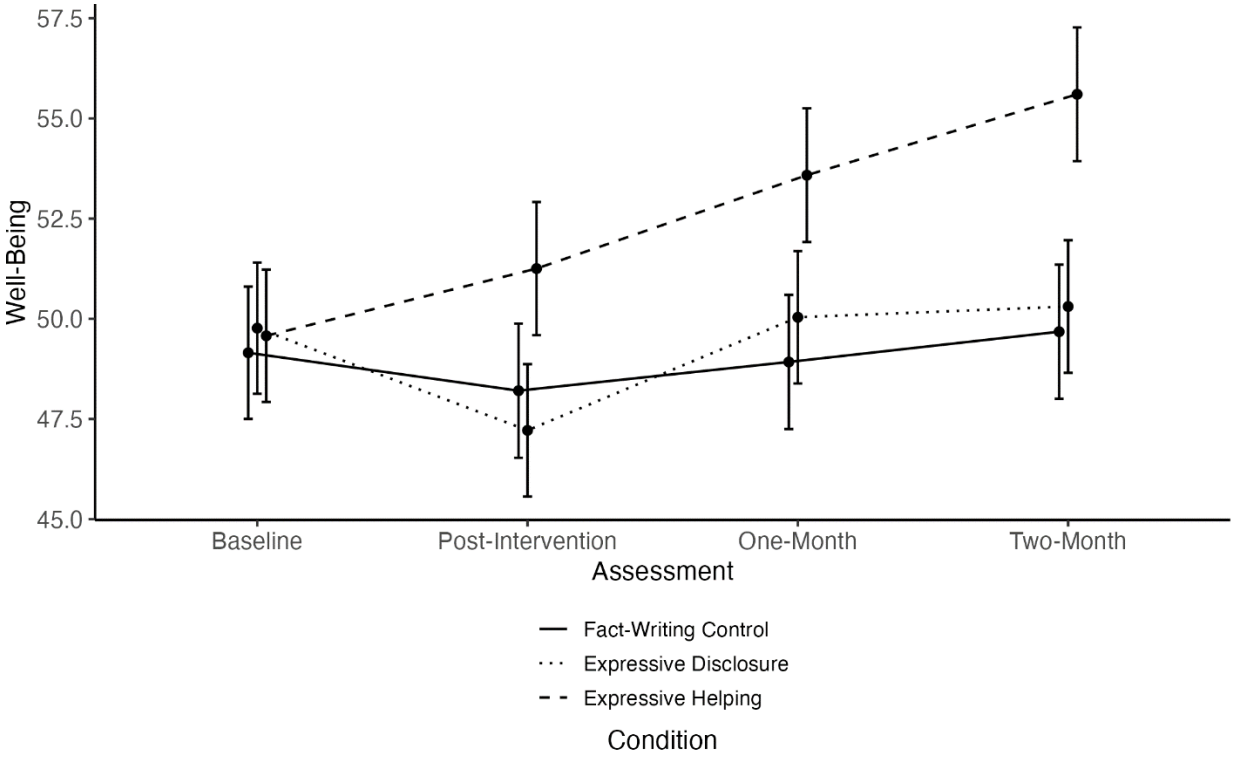
Estimated Marginal Means for Ratings of Negative Emotion Across Writing Sessions



Note. Error bars represent standard errors of the means. After the first session, participants in the expressive disclosure and expressive helping conditions reported greater negative emotions than participants in the control condition, with participants in the expressive helping condition expressing more negative emotions than participants in the expressive disclosure condition. Following the second session, participants in both the expressive disclosure and expressive helping conditions reported greater negative emotions than participants in the control condition. After the third session, only participants in the expressive disclosure condition reported greater negative emotions than in both other conditions.

Figure 10

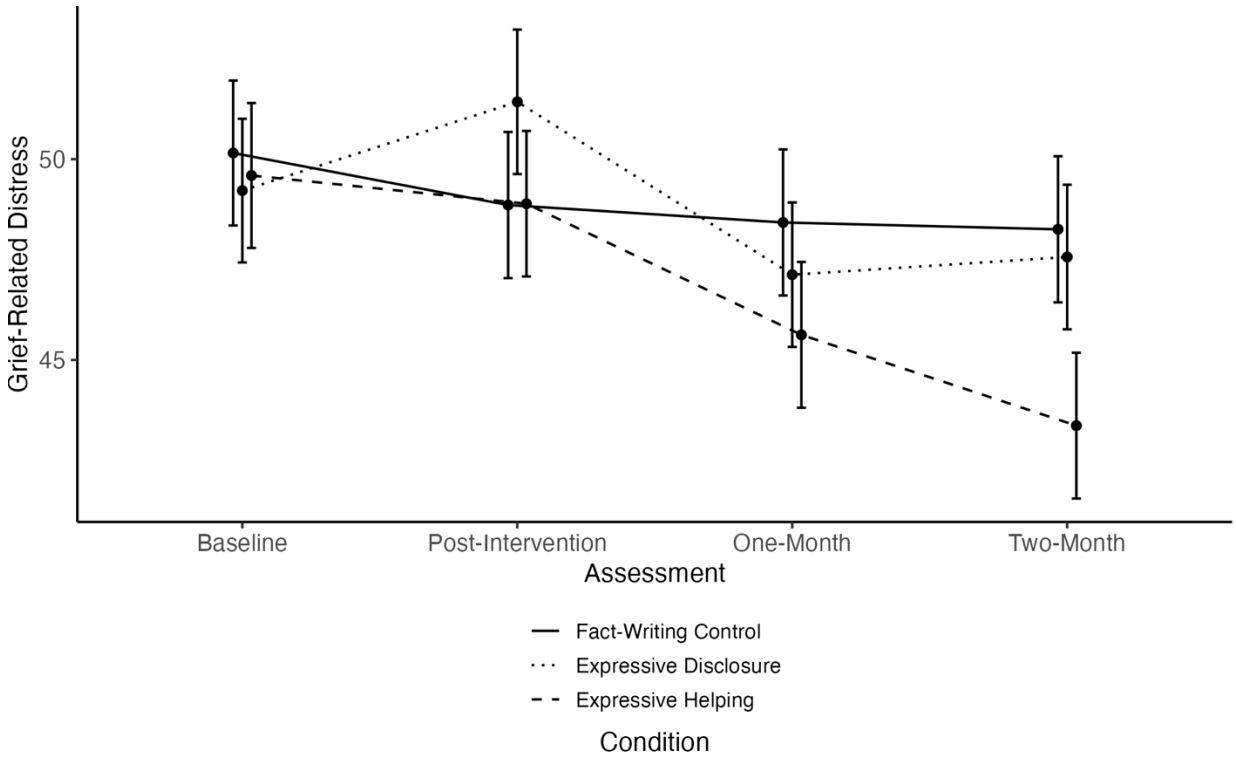
Estimated Marginal Means for Well-Being Across Assessments



Note. Error bars represent standard errors of the means. Participants in the expressive helping condition evidenced significantly greater increases in well-being from baseline to the 1- and 2-month follow-ups than participants in the control condition. Participants in the expressive disclosure condition showed a decrease in well-being at post-intervention but returned to baseline levels at the 1- and 2-month follow-ups. At the 2-month follow-up, participants in the expressive helping group reported marginally significantly greater well-being than participants in the expressive disclosure group.

Figure 11

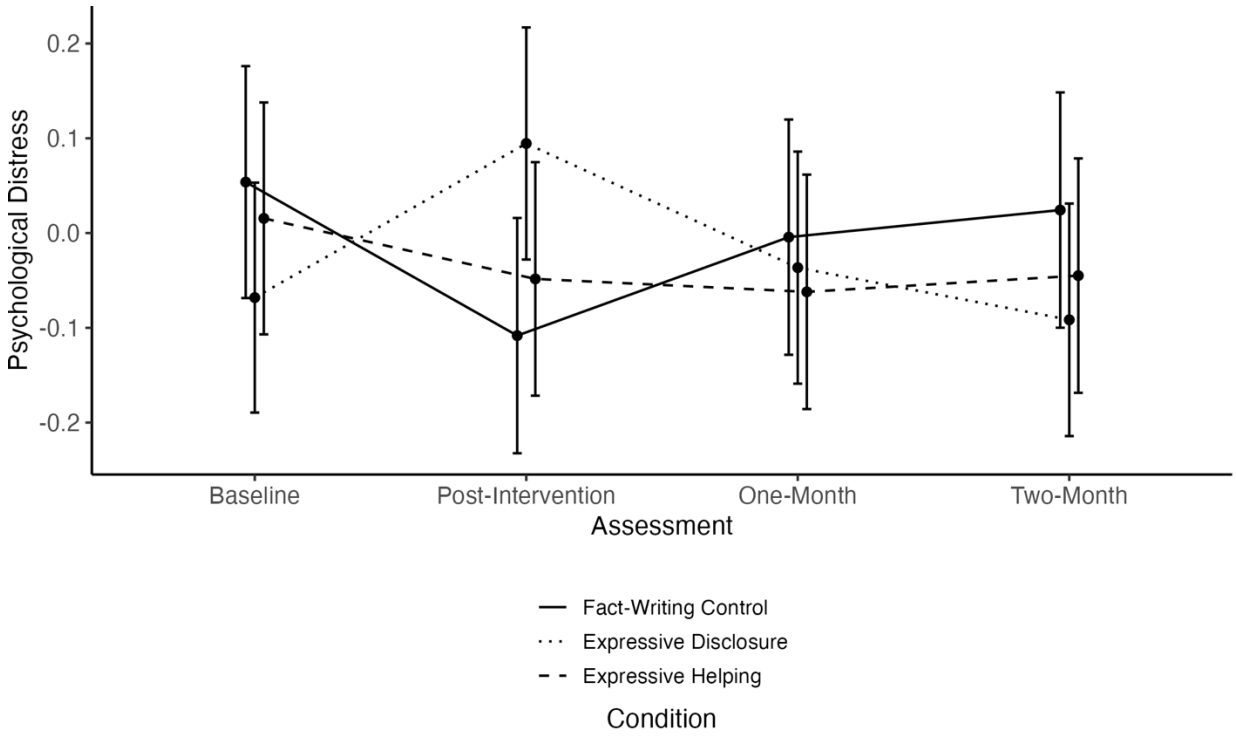
Estimated Marginal Means for Grief-Related Distress Across Assessments



Note. Error bars represent standard errors of the means. Compared with participants in the expressive disclosure and control conditions, participants in the expressive helping condition evidenced marginally significant greater decreases in grief-related distress from baseline to the 1-month follow-up and a significantly greater decrease at the 2-month follow-up. Participants in the expressive disclosure condition evidenced increases in grief-related distress from baseline to post-intervention but decreased to baseline levels at both follow-ups.

Figure 12

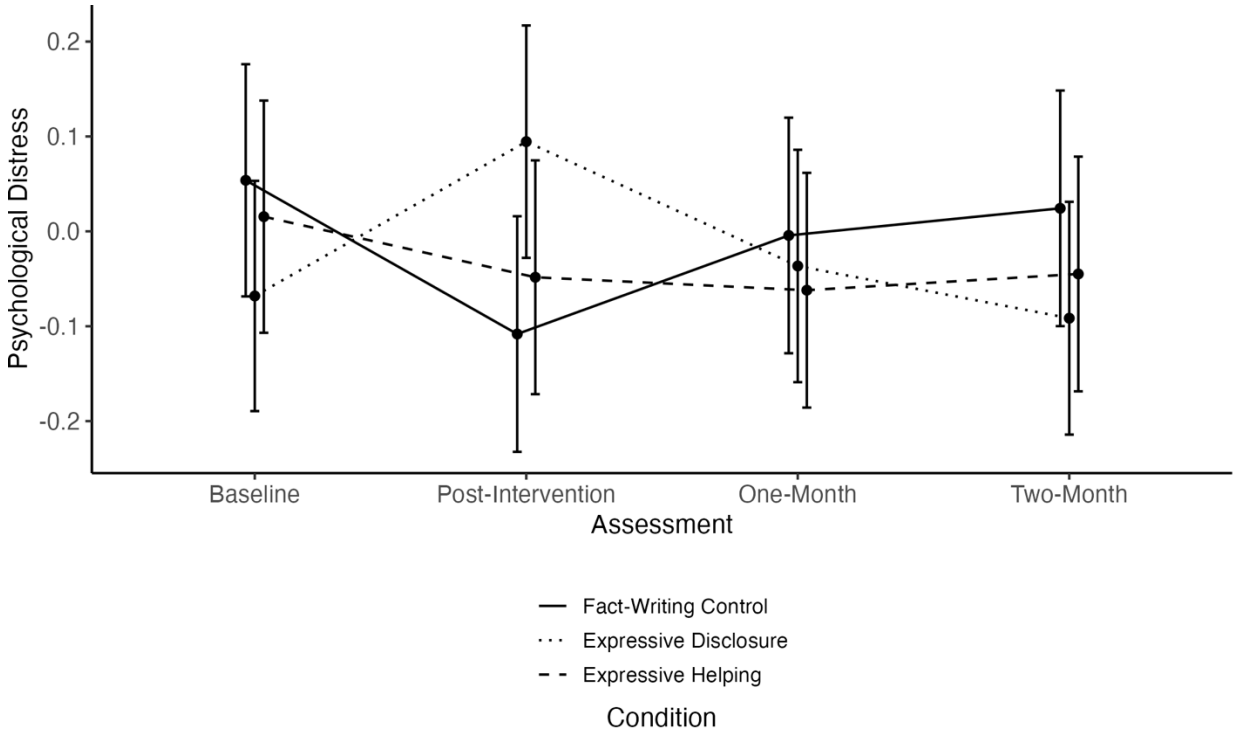
Estimated Marginal Means for Psychological Distress Across Assessments



Note. Error bars represent standard errors of the means. Participants in the expressive disclosure condition experienced a significant increase in psychological distress at post-intervention, returning to baseline levels at the 1- and 2-month follow-ups. Overall levels of psychological distress did not significantly differ between conditions at any time point.

Figure 13

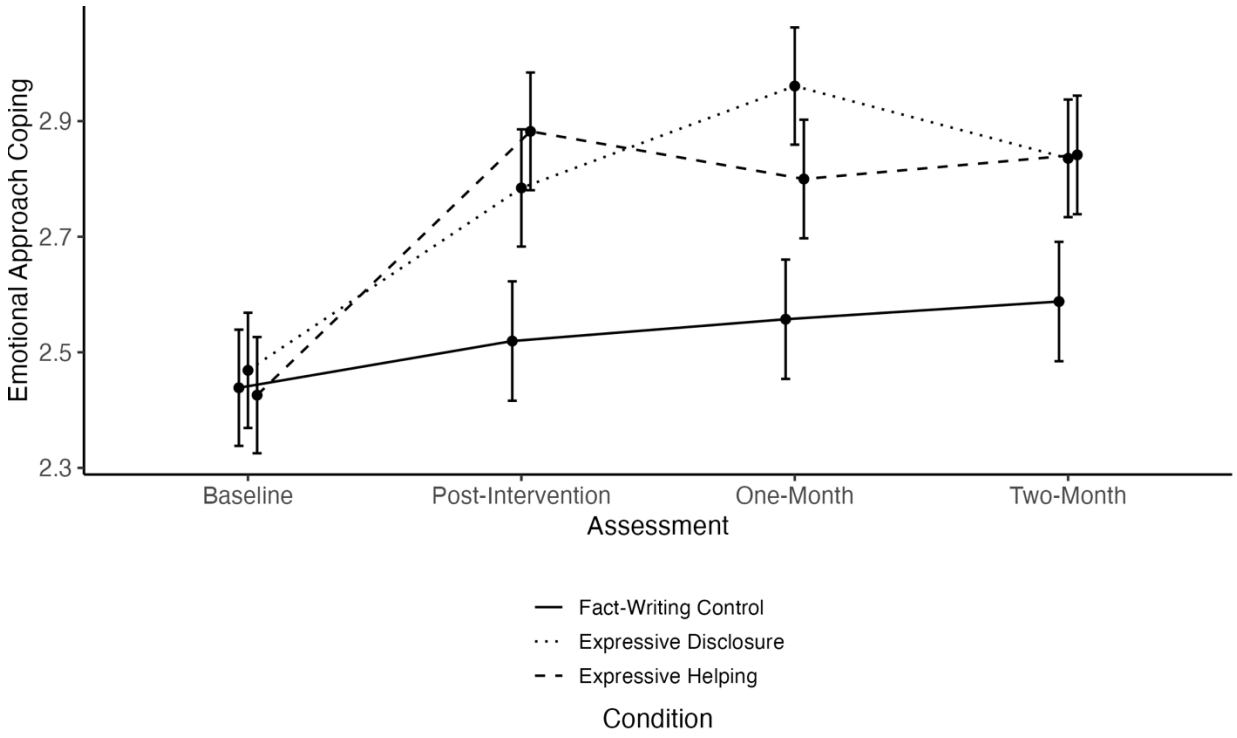
Estimated Marginal Means for Physical Symptoms Across Assessments



Note. Error bars represent standard errors of the means. There were no main effects of time, condition, or their interaction on physical symptoms.

Figure 14

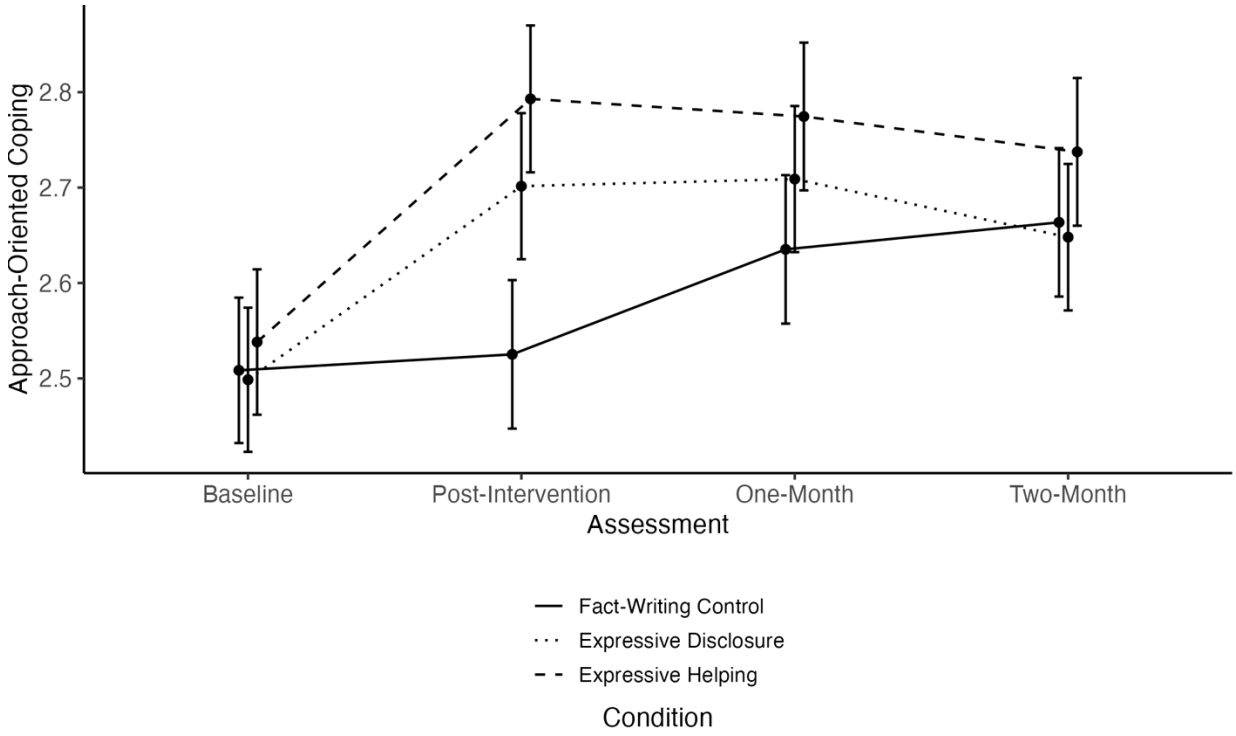
Estimated Marginal Means for Ratings of Emotional Approach Coping Across Assessments



Note. Error bars represent standard errors of the means. Participants in the expressive helping condition demonstrated significant increases in emotional approach coping from baseline to post-intervention, as well as the 1- and 2-month follow-ups. Participants in the expressive disclosure condition also evidenced significant increases in emotional approach coping from baseline to post-intervention, the 1-month, and 2-month follow-ups. Participants in the control condition did not exhibit significant changes in emotional approach coping from baseline to any assessment.

Figure 15

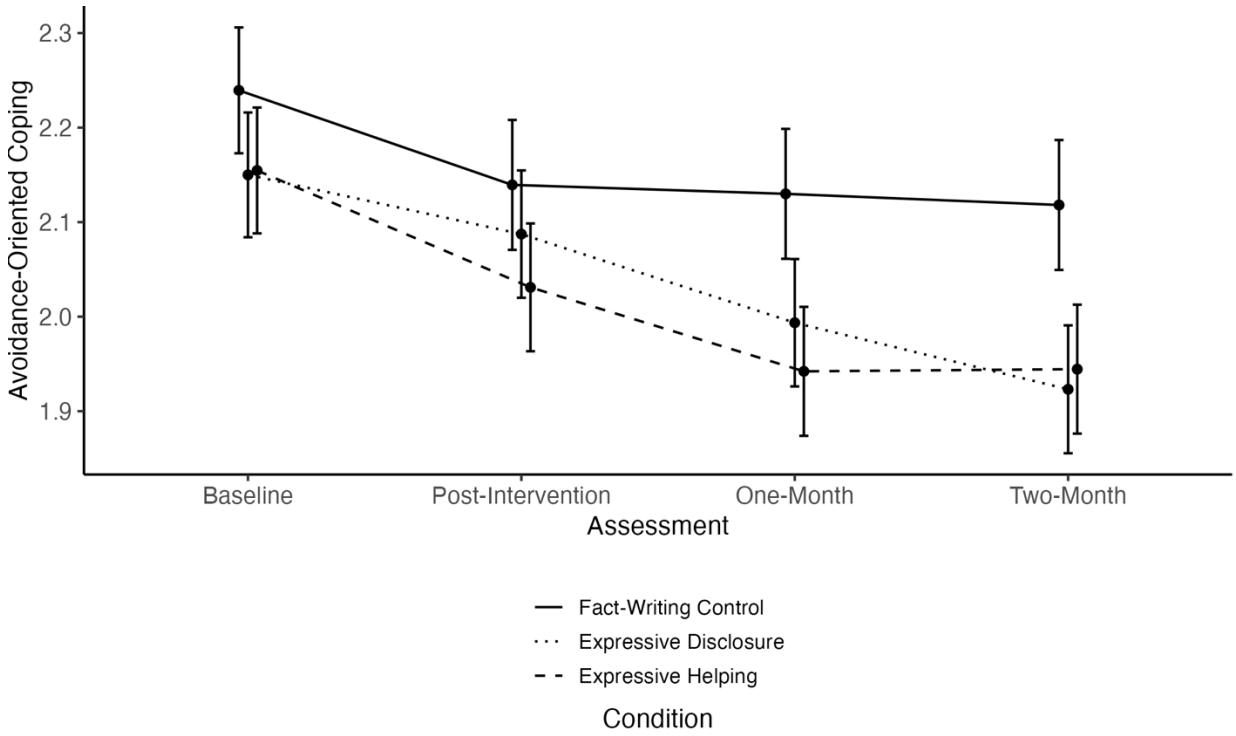
Estimated Marginal Means for Ratings of Approach-Oriented Coping Across Assessments



Note. Error bars represent standard errors of the means. Participants in all three conditions evidenced increases in approach coping from baseline to the 2-month follow-up. Participants in the expressive helping and expressive disclosure conditions, but not the control condition, also exhibited significant increases in approach coping at post-intervention.

Figure 16

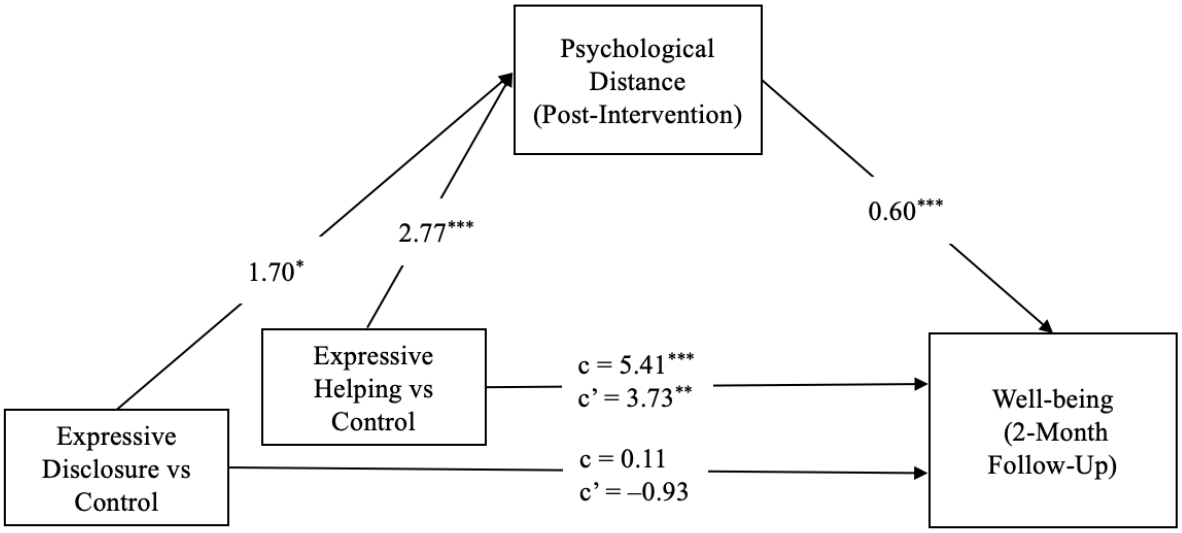
Estimated Marginal Means for Ratings of Avoidance-Oriented Coping Across Assessments



Note. Error bars represent standard errors of the means. There was a main effect of time on avoidance-oriented coping such that participants evidenced decreases in avoidance-oriented coping from baseline to the 2-month follow-up. Although avoidance-oriented coping decreased over time for all conditions, change was the greatest among the expressive helping and expressive disclosure conditions.

Figure 17

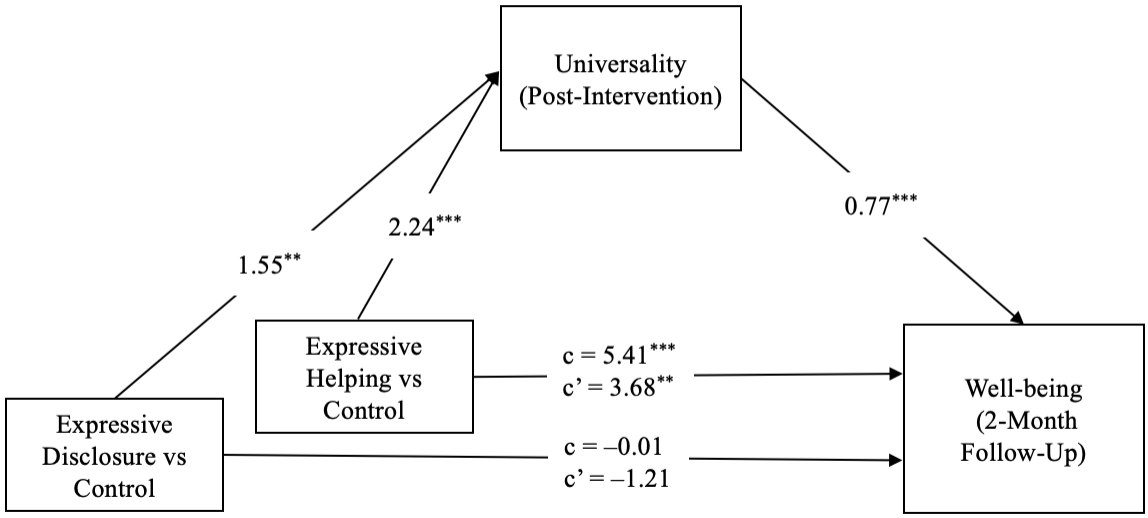
Mediation Model of Condition, Post-Intervention Psychological Distance, and Well-Being at the 2-Month Follow-Up



Note. Baseline psychological distance and well-being were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Figure 18

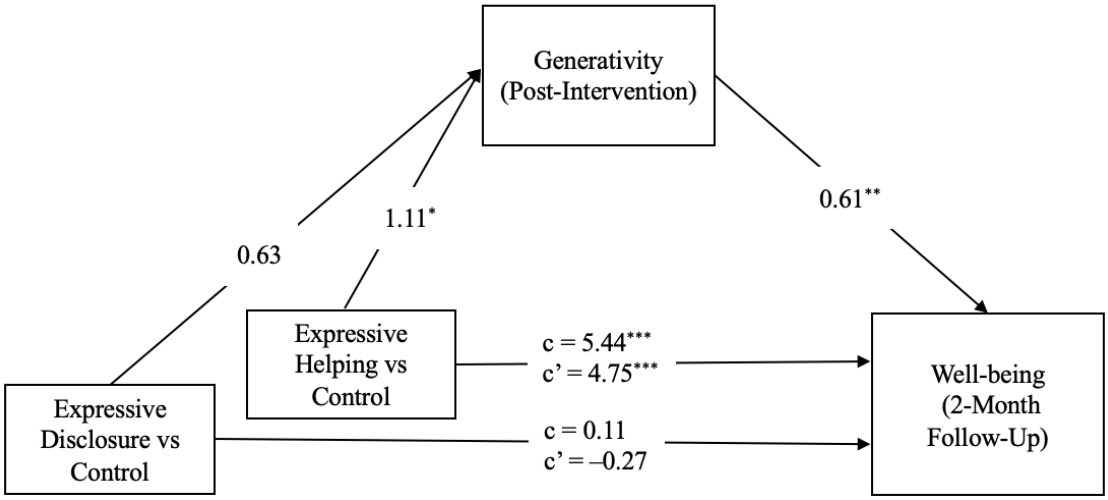
Mediation Model of Condition, Post-Intervention Universality, and Well-Being at the 2-Month Follow-Up



Note. Baseline universality and well-being were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Figure 19

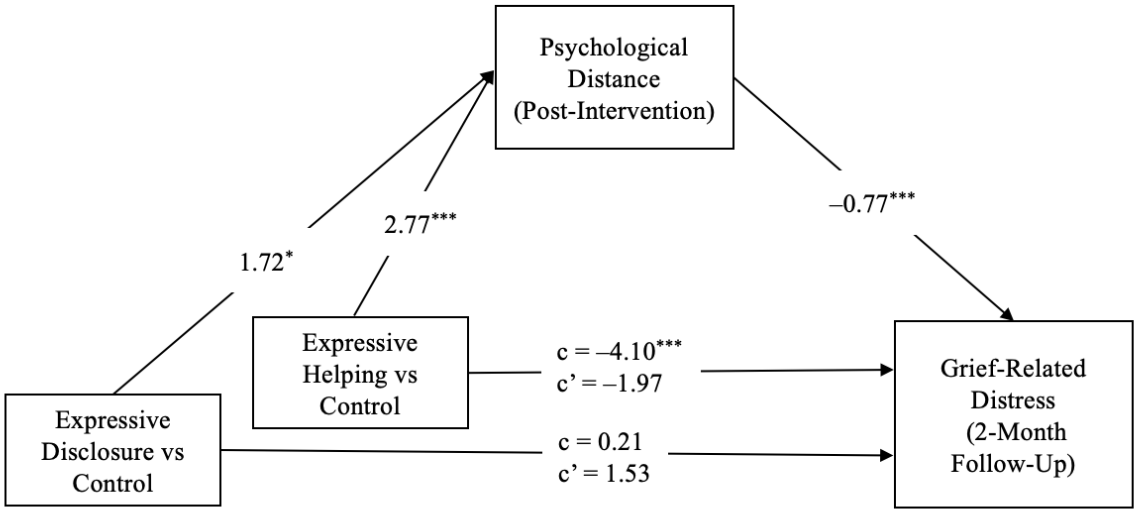
Mediation Model of Condition, Post-Intervention Generativity, and Well-Being at the 2-Month Follow-Up



Note. Baseline generativity and well-being were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Figure 20

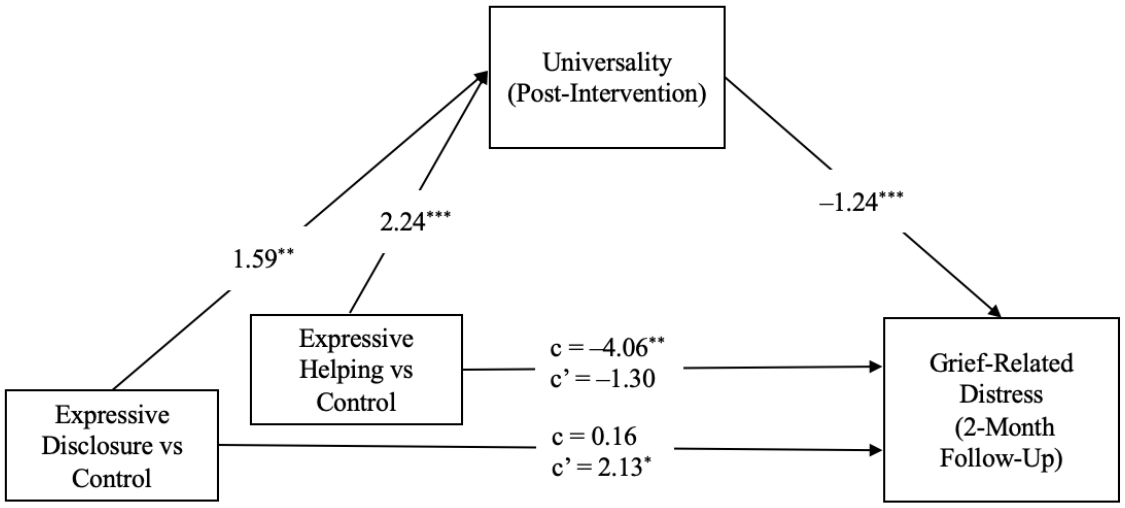
Mediation Model of Condition, Post-Intervention Psychological Distance, and Grief-Related Distress at the 2-Month Follow-Up



Note. Baseline psychological distance and grief-related distress were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Figure 21

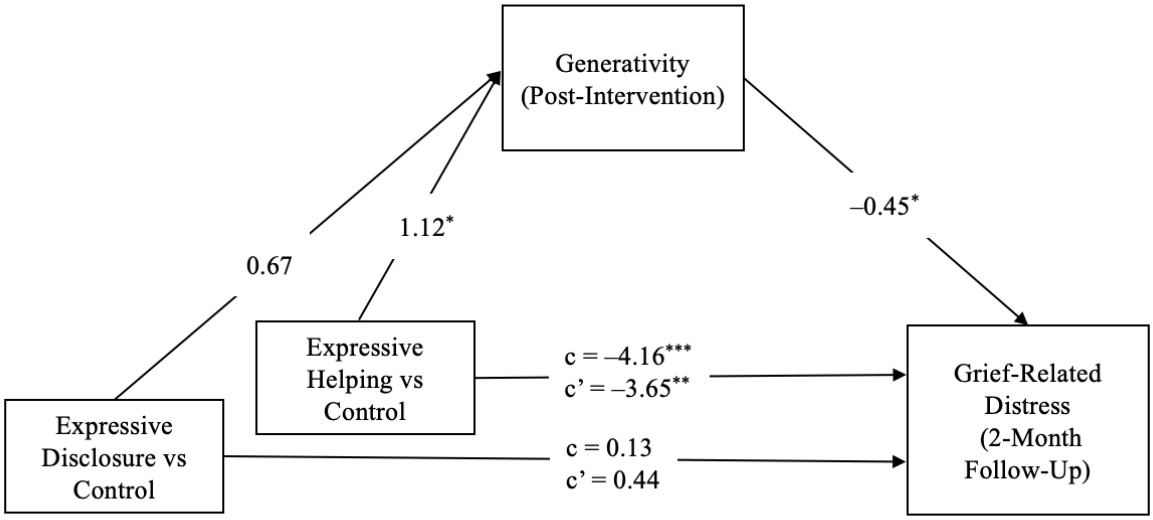
Mediation Model of Condition, Post-Intervention Universality, and Grief-Related Distress at the 2-Month Follow-Up



Note. Baseline universality and grief-related distress were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Figure 22

Mediation Model of Condition, Post-Intervention Generativity, and Grief-Related Distress at the 2-Month Follow-Up



Note. Baseline generativity and grief-related distress were included as covariates. Standardized regression coefficients are presented. *$p < .05$, **$p < .01$, ***$p < .001$.

Tables

Table 11

Demographic and Loss Characteristics by Condition

	Condition				
	All (N = 178)	ED (n = 60)	EH (n = 59)	Control (n = 59)	p-value
Demographics					
Age *Mean* (*SD*)[a]	21.74 (2.18)	21.63 (2.15)	21.85 (2.20)	21.73 (2.22)	.87
Gender Identity *n* (%)[b]					.53
Female	113 (64)	36 (60)	35 (59)	42 (71)	
Male	45 (25)	17 (28)	15 (25)	13 (22)	
Nonbinary	20 (11)	7 (12)	9 (15)	4 (7)	
Race/Ethnicity *n* (%)[c]					.47
Hispanic or Latino	33 (19)	11 (18)	16 (27)	6 (10)	
White	93 (52)	31 (52)	29 (49)	33 (56)	
Asian	23 (13)	9 (15)	5 (9)	9 (15)	
Black	12 (7)	3 (5)	5 (9)	4 (7)	
Other	17 (10)	6 (10)	4 (7)	7 (12)	
Education *n* (%)[b]					.55
Less Than College	30 (17)	13 (22)	6 (10)	11 (19)	
Some College	86 (48)	27 (45)	31 (53)	28 (48)	
College Graduate or Higher	62 (35)	20 (33)	22 (37)	20 (34)	
Employment *n* (%)[b]					.81
Employed Full Time	41 (23)	15 (25)	13 (22)	13 (22)	
Employed Part Time	46 (26)	19 (32)	15 (25)	12 (20)	
Student	79 (44)	23 (38)	27 (46)	29 (49)	
Unemployed	12 (7)	3 (5)	4 (7)	5 (9)	
Income *n* (%)[b]					.37
Under $15,000	32 (18)	13 (22)	7 (12)	12 (20)	
15,001–30,000	37 (21)	15 (25)	9 (15)	13 (22)	
30,001–60,000	40 (23)	13 (22)	16 (27)	11 (19)	
60,001–100,000	38 (21)	8 (13)	18 (31)	12 (20)	
Over 100,000	31 (17)	11 (18)	9 (15)	11 (19)	

Loss Characteristics					
Age When Death Occurred *Mean* (*SD*)[a]	19.83 (2.27)	19.66 (2.31)	19.93 (2.19)	19.90 (2.35)	.78
Years Since Death *Mean* (*SD*)[a]	1.91 (1.48)	1.98 (1.52)	1.91 (1.53)	1.83 (1.40)	.86
Deceased Relation *n* (*%*)[c]					.62
Parent	41 (23)	12 (20)	15 (25)	14 (24)	
Sibling	8 (5)	2 (3)	2 (3)	4 (7)	
Grandparent	74 (42)	24 (40)	21 (36)	29 (49)	
Aunt/Uncle	19 (11)	5 (8)	8 (14)	6 (10)	
Cousin	6 (3)	2 (3)	3 (5)	1 (2)	
Friend/Partner	28 (16)	14 (23)	9 (15)	5 (9)	
Other	2 (1)	1 (2)	1 (2)	0 (0)	
Manner of Death *n* (*%*)[b]					.14
Natural	140 (79)	44 (73)	49 (83)	47 (80)	
Accidental	16 (9)	9 (15)	2 (3)	5 (9)	
Suicide	18 (10)	4 (7)	8 (14)	6 (10)	
Homicide	4 (2)	3 (5)	0 (0)	1 (2)	

Note. ED = expressive disclosure, EH = expressive helping, *SD* = standard deviation, a = analysis of variance, b = chi-square test, c = Fisher's exact test

Table 12

Means and Standard Deviations for Subjective Experience of the Intervention Variables

	Writing Session 1			Writing Session 2			Writing Session 3		
	Control	ED	EH	Control	ED	EH	Control	ED	EH
Psychological Distance	12.29 (6.01)	15.05 (4.91)	15.86 (4.9)	11.28 (6.24)	15.68 (4.69)	16.57 (5.2)	11.00 (5.73)	16.98 (5.92)	17.60 (5.79)
Universality	10.86 (5.04)	14.64 (3.30)	14.71 (2.94)	12.19 (5.23)	15.15 (3.12)	15.52 (3.22)	11.28 (5.34)	16.19 (3.42)	16.72 (3.28)
Generativity	6.95 (3.67)	9.19 (4.24)	9.55 (3.97)	7.23 (4.47)	9.69 (4.20)	10.21 (4.61)	7.36 (3.85)	9.20 (3.89)	11.04 (3.88)
Meaningfulness	2.43 (0.91)	4.10 (0.92)	4.47 (0.63)	2.36 (0.94)	3.96 (1.23)	4.38 (0.67)	2.11 (1.03)	4.15 (1.00)	4.63 (0.62)
Difficulty	1.79 (0.97)	3.02 (1.25)	2.78 (1.23)	1.68 (0.87)	2.89 (1.07)	2.91 (1.08)	1.89 (0.97)	2.69 (1.23)	2.72 (1.36)
Positive Emotion	4.20 (1.31)	3.31 (1.50)	3.16 (1.21)	4.00 (1.49)	3.22 (1.42)	3.59 (1.11)	3.74 (1.55)	3.59 (1.47)	5.09 (1.24)
Negative Emotion	3.12 (1.49)	4.08 (1.33)	4.76 (1.25)	3.02 (1.59)	4.20 (1.34)	4.28 (1.14)	2.79 (1.42)	4.02 (1.28)	3.00 (1.12)

Note. ED = expressive disclosure, EH = expressive helping

Table 13

Means and Standard Deviations for Primary and Secondary Outcomes

	Baseline (N = 178)			Post-Intervention (N = 165)			1-Month Follow-Up (N = 163)			2-Month Follow-Up (N = 162)		
	Control	ED	EH	Control	ED	EH	Control	ED	EH	Control	ED	EH
Well-Being (MHC-SF)												
Total	49.15 (11.19)	49.77 (11.51)	49.58 (13.68)	48.43 (12.28)	47.59 (11.07)	51.12 (14.32)	49.15 (12.59)	50.41 (12.17)	53.26 (14.82)	49.91 (11.51)	50.95 (12.44)	55.28 (14.88)
Emotional	10.97 (3.08)	11.13 (2.89)	11.37 (3.53)	11.02 (3.17)	10.73 (2.53)	11.64 (3.53)	11.17 (2.79)	11.20 (2.55)	12.30 (3.34)	11.11 (3.04)	11.58 (2.88)	12.48 (3.33)
Social	15.59 (3.77)	15.67 (5.15)	14.92 (4.98)	15.32 (4.22)	15.21 (4.63)	16.13 (5.57)	15.89 (4.62)	16.41 (5.36)	17.00 (5.81)	16.04 (3.82)	16.31 (5.17)	17.85 (6.04)
Psychological	22.59 (5.66)	22.97 (4.74)	23.29 (6.50)	22.09 (6.22)	21.64 (5.02)	23.36 (6.76)	22.09 (6.42)	22.80 (5.31)	23.96 (6.76)	22.75 (5.88)	23.05 (5.42)	24.94 (6.48)
Grief Reactions (TGI-SR)	50.15 (12.16)	49.22 (12.96)	49.59 (15.42)	49.17 (12.36)	50.73 (12.34)	49.25 (16.17)	48.74 (13.48)	46.43 (13.35)	46.63 (14.93)	48.57 (13.60)	47.07 (13.97)	44.37 (14.83)
Psychological Distress	0.05 (0.85)	–0.07 (0.98)	0.02 (0.98)	–0.07 (0.85)	0.08 (0.94)	–0.02 (1.01)	0.03 (0.83)	–0.05 (1.02)	0.02 (0.95)	0.06 (0.90)	–0.09 (0.96)	0.03 (0.92)
Depressive Symptoms (CES-D)	27.12 (10.38)	25.60 (11.77)	27.37 (11.95)	25.74 (11.06)	27.23 (11.08)	26.98 (12.63)	25.34 (11.24)	23.54 (12.77)	25.52 (13.38)	26.02 (11.82)	22.93 (12.83)	25.98 (12.32)
Anxiety (PROMIS)	63.83 (7.28)	62.97 (8.01)	63.05 (8.19)	62.32 (7.92)	63.96 (9.25)	62.34 (9.76)	63.28 (7.37)	63.16 (9.30)	62.89 (8.50)	62.63 (8.31)	62.15 (8.73)	62.19 (8.86)
Physical Symptoms	25.90 (16.07)	27.05 (22.57)	27.27 (20.44)	23.81 (16.42)	27.73 (21.07)	26.43 (21.37)	25.74 (18.69)	26.73 (21.15)	26.56 (22.10)	26.60 (16.84)	27.71 (21.05)	26.07 (20.70)
Coping (COPE)												
Approach	2.51 (0.60)	2.50 (0.64)	2.54 (0.59)	2.52 (0.63)	2.71 (0.58)	2.77 (0.58)	2.63 (0.55)	2.72 (0.55)	2.79 (0.56)	2.66 (0.53)	2.67 (0.61)	2.75 (0.49)
Emotional Approach	2.44 (0.70)	2.47 (0.81)	2.43 (0.79)	2.52 (0.72)	2.80 (0.76)	2.87 (0.77)	2.56 (0.70)	2.98 (0.77)	2.81 (0.83)	2.59 (0.78)	2.86 (0.80)	2.85 (0.77)
Avoidance	2.24 (0.50)	2.15 (0.50)	2.15 (0.51)	2.15 (0.42)	2.09 (0.56)	2.03 (0.53)	2.14 (0.48)	1.99 (0.53)	1.96 (0.55)	2.12 (0.48)	1.93 (0.51)	1.96 (0.53)
Psychological Distance	13.07 (4.95)	13.07 (5.01)	13.39 (4.46)	13.40 (3.92)	14.80 (5.39)	16.32 (5.12)	13.51 (4.75)	15.12 (5.63)	16.81 (4.70)	14.08 (4.37)	15.16 (5.37)	15.74 (4.81)
Universality	13.61 (3.51)	13.85 (2.95)	13.71 (3.10)	12.83 (3.71)	14.79 (3.68)	15.23 (3.09)	12.75 (3.84)	14.52 (3.61)	14.67 (3.06)	13.38 (3.97)	14.22 (3.44)	14.35 (3.12)

Generativity	8.90 (3.07)	8.87 (3.77)	9.07 (3.17)	9.04 (3.69)	9.61 (3.91)	10.12 (3.80)	9.21 (3.45)	9.30 (4.03)	9.74 (3.52)	9.28 (3.70)	9.13 (3.71)	9.30 (3.60)

Note. ED = expressive disclosure, EH = expressive helping

Table 14

Correlations Among Primary and Secondary Outcomes and Hypothesized Mediators at Baseline

	2	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*
Total Well-Being	.888***	.880***	.920***	–.322***	–.598***	–.688***	–.429***	–.230**	.394***	.417***	–.218**	.044	.233**	.237**
(2) Emotional Well-Being		.710***	.758***	–.370***	–.591***	–.667***	–.437***	–.239**	.273***	.293***	–.275***	.086	.194**	.176*
(3) Social Well-Being			.663***	–.280***	–.534***	–.595***	–.402***	–.259***	.358***	.364***	–.172*	.058	.213**	.247***
(4) Psych. Well-Being				–.251***	–.510***	–.609***	–.344***	–.146	.397***	.428***	–.171*	–.003	.215**	.206**
(5) Grief-Related Distress					.479***	.435***	.459***	.419***	–.171*	–.201**	.518***	–.263***	–.066	–.074
(6) Psych. Distress						.934***	.934***	.491***	–.206**	–.215**	.346***	–.084	–.157*	–.222**
(7) Depressive Symptoms							.745***	.463***	–.244**	–.236**	.316***	–.042	–.179*	–.268***
(8) Anxiety Symptoms								.454***	–.140	–.165*	.330***	–.115	–.115	–.146
(9) Physical Symptoms									.012	–.001	.179*	–.099	.060	–.002
(10) Approach Coping										.744***	–.052	–.045	.135	.197**
(11) Emotional Approach Coping											–.141	–.069	.140	.158*
(12) Avoidance Coping												–.087	–.073	–.079
(13) Psych. Distance													–.118	–.103
(14) Universality														.348***
(15) Generativity														

*Note. *p < .05 **p < .01 ***p < .001*

Table 15

Time-by-Condition Interaction Coefficients for the Primary and Secondary Outcomes

	Baseline to 1-Month Follow-Up					Baseline to 2-Month Follow-Up				
	b	*SE*	*df*	*t*	*p*	*b*	*SE*	*df*	*t*	*p*
Primary Outcomes										
Well-Being										
EH vs. Control	4.24**	1.26	485.86	3.37	.002	5.50***	1.26	485.86	4.37	<.001
EH vs. ED	3.74**	1.24	484.81	3.01	.008	5.49***	1.25	484.86	4.40	<.001
Grief-Related Distress										
EH vs. Control	–2.24†	1.04	483.86	–2.15	.082	–4.33***	1.04	483.86	–4.15	<.001
EH vs. ED	–1.87	1.03	483.23	–1.82	.163	–4.57***	1.03	483.26	–4.43	<.001
Secondary Outcomes										
Psychological Distress										
EH vs. Control	–0.02	0.09	486.01	–0.20	.977	–0.03	0.09	486.01	–0.33	.943
EH vs. ED	–0.11	0.09	484.93	–1.17	.474	–0.04	0.09	484.98	–0.39	.918
Physical Symptoms										
EH vs. Control	–1.43	1.64	484.40	–0.87	.657	–2.78	1.64	484.40	–1.70	.207
EH vs. ED	–1.38	1.62	483.66	–0.86	.669	–2.60	1.62	483.69	–1.60	.246
Emotional Approach Coping										
EH vs. Control	0.26†	0.11	490.65	2.28	.059	0.27*	0.11	490.65	2.38	.046
EH vs. ED	–0.12	0.11	488.66	–1.07	.534	0.05	0.11	488.78	0.44	.898
Approach–Oriented Coping										
EH vs. Control	0.11	0.07	488.49	1.49	.295	0.04	0.07	488.49	0.60	.819
EH vs. ED	0.03	0.07	486.91	0.36	.931	0.05	0.07	486.99	0.69	.771
Avoidance Oriented Coping										
EH vs. Control	–0.10	0.08	492.56	–1.25	.424	–0.09	0.08	492.56	–1.08	.527
EH vs. ED	–0.06	0.08	490.23	–0.69	.770	0.02	0.08	490.40	0.20	.977

Note. *SD* = standard deviation, EH = expressive helping, ED = expressive disclosure, †$p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$

Table 16

Results of Multilevel Linear Model Analysis for Well-Being by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	49.15 ***	1.65	29.78	**<0.001**	45.91 – 52.39
Post-Intervention	–0.95	0.90	–1.06	0.291	–2.71 – 0.81
1-Month	–0.23	0.90	–0.26	0.798	–1.99 – 1.53
2-Month	0.53	0.90	0.59	0.558	–1.23 – 2.28
Expressive Disclosure	0.61	2.32	0.26	0.792	–3.95 – 5.18
Expressive Helping	0.42	2.33	0.18	0.856	–4.16 – 5.01
Post-Intervention*Expressive Disclosure	–1.60	1.25	–1.28	0.200	–4.06 – 0.85
1-Month*Expressive Disclosure	0.50	1.25	0.40	0.689	–1.95 – 2.96
2-Month*Expressive Disclosure	0.01	1.25	0.01	0.991	–2.45 – 2.48
Post-Intervention*Expressive Helping	2.62 *	1.25	2.10	**0.036**	0.17 – 5.08
1-Month*Expressive Helping	4.24 ***	1.26	3.37	**0.001**	1.76 – 6.71
2-Month*Expressive Helping	5.50 ***	1.26	4.37	**<0.001**	3.03 – 7.97
Random Effects					
σ^2	21.41				
$\tau_{00\ subjectid}$	139.36				
ICC	0.87				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.029 / 0.871				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Table 17

Results of Multilevel Linear Model Analysis for Grief-Related Distress by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	50.15 ***	1.80	27.80	**<0.001**	46.61 – 53.69
Post-Intervention	–1.29	0.74	–1.75	0.081	–2.75 – 0.16
1-Month	–1.73 *	0.74	–2.33	**0.020**	–3.19 – –0.27
2-Month	–1.90 *	0.74	–2.56	**0.011**	–3.36 – –0.44
Expressive Disclosure	–0.94	2.54	–0.37	0.713	–5.92 – 4.05
Expressive Helping	–0.56	2.55	–0.22	0.827	–5.57 – 4.45
Post-Intervention*Expressive Disclosure	3.51 ***	1.04	3.39	**0.001**	1.47 – 5.54
1-Month*Expressive Disclosure	–0.36	1.04	–0.35	0.725	–2.40 – 1.67
2-Month*Expressive Disclosure	0.25	1.04	0.24	0.813	–1.79 – 2.28
Post-Intervention*Expressive Helping	0.59	1.04	0.57	0.567	–1.44 – 2.63
1-Month*Expressive Helping	–2.24 *	1.04	–2.15	**0.032**	–4.29 – –0.19
2-Month*Expressive Helping	–4.33 ***	1.04	–4.15	**<0.001**	–6.37 – –2.28
Random Effects					
σ^2	14.64				
$\tau_{00\ subjectid}$	177.33				
ICC	0.92				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.021 / 0.925				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Table 18

Results of Multilevel Linear Model Analysis for Psychological Distress by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	0.05	0.12	0.44	0.660	–0.19 – 0.29
Post-Intervention	–0.16 *	0.07	–2.40	**0.017**	–0.29 – –0.03
1-Month	–0.06	0.07	–0.86	0.389	–0.19 – 0.07
2-Month	–0.03	0.07	–0.44	0.662	–0.16 – 0.10
Expressive Disclosure	–0.12	0.17	–0.71	0.480	–0.46 – 0.22
Expressive Helping	–0.04	0.17	–0.22	0.825	–0.38 – 0.30
Post-Intervention*Expressive Disclosure	0.32 ***	0.09	3.45	**0.001**	0.14 – 0.51
1-Month*Expressive Disclosure	0.09	0.09	0.95	0.341	–0.10 – 0.27
2-Month*Expressive Disclosure	0.01	0.09	0.06	0.949	–0.18 – 0.19
Post-Intervention*Expressive Helping	0.10	0.09	1.04	0.298	–0.09 – 0.28
1-Month*Expressive Helping	–0.02	0.09	–0.20	0.838	–0.21 – 0.17
2-Month*Expressive Helping	–0.03	0.09	–0.33	0.745	–0.22 – 0.16
Random Effects					
σ^2	0.12				
$\tau_{00\ subjectid}$	0.76				
ICC	0.86				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.004 / 0.863				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Table 19

Results of Multilevel Linear Model Analysis for Physical Symptoms by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	25.90 ***	2.59	9.99	**<0.001**	20.81 – 30.99
Post-intervention	–2.20	1.17	–1.88	0.060	–4.49 – 0.09
1-Month	–0.27	1.17	–0.23	0.816	–2.56 – 2.02
2-Month	0.60	1.17	0.51	0.610	–1.69 – 2.89
Expressive Disclosure	1.15	3.65	0.32	0.752	–6.01 – 8.32
Expressive Helping	1.37	3.66	0.37	0.708	–5.82 – 8.57
Post-intervention*Expressive Disclosure	2.88	1.63	1.77	0.078	–0.32 – 6.07
1-Month*Expressive Disclosure	–0.05	1.63	–0.03	0.976	–3.25 – 3.15
2-Month*Expressive Disclosure	–0.18	1.63	–0.11	0.911	–3.39 – 3.02
Post-intervention*Expressive Helping	0.98	1.63	0.60	0.546	–2.21 – 4.18
1-Month*Expressive Helping	–1.43	1.64	–0.87	0.382	–4.65 – 1.79
2-Month*Expressive Helping	–2.78	1.64	–1.70	0.090	–6.00 – 0.44
Random Effects					
σ^2	36.21				
$\tau_{00\ subjectid}$	359.96				
ICC	0.91				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.003 / 0.909				
AIC	4922.609				

Note. SE = standard error, CI = 95% confidence interval, **p* < .05 ***p* < .01 ****p* < .001

Table 20

Results of Multilevel Linear Model Analysis for Emotional Approach Coping by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	2.44 ***	0.10	24.25	**<0.001**	2.24 – 2.64
Post-Intervention	0.08	0.08	1.02	0.309	–0.08 – 0.24
1-Month	0.12	0.08	1.49	0.136	–0.04 – 0.27
2-Month	0.15	0.08	1.88	0.061	–0.01 – 0.31
Expressive Disclosure	0.03	0.14	0.21	0.831	–0.25 – 0.31
Expressive Helping	–0.01	0.14	–0.09	0.929	–0.29 – 0.27
Post-Intervention*Expressive Disclosure	0.23 *	0.11	2.12	**0.035**	0.02 – 0.45
1-Month*Expressive Disclosure	0.37 ***	0.11	3.36	**0.001**	0.16 – 0.59
2-Month*Expressive Disclosure	0.22	0.11	1.95	0.051	–0.00 – 0.44
Post-Intervention*Expressive Helping	0.38 ***	0.11	3.38	**0.001**	0.16 – 0.59
1-Month*Expressive Helping	0.26 *	0.11	2.29	**0.023**	0.04 – 0.47
2-Month*Expressive Helping	0.27 *	0.11	2.38	**0.017**	0.05 – 0.49
Random Effects					
σ^2	0.17				
$\tau_{00\ codename}$	0.43				
ICC	0.72				
$N_{codename}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.055 / 0.731				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Table 21

Results of Multilevel Linear Model Analysis for Approach-Oriented Coping by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	2.51 ***	0.08	32.93	**<0.001**	2.36 – 2.66
Post-Intervention	0.02	0.05	0.32	0.749	–0.09 – 0.12
1–Month	0.13 *	0.05	2.43	**0.015**	0.02 – 0.23
2–Month	0.16 **	0.05	2.97	**0.003**	0.05 – 0.26
Expressive Disclosure	–0.01	0.11	–0.09	0.927	–0.22 – 0.20
Expressive Helping	0.03	0.11	0.28	0.783	–0.18 – 0.24
Post-Intervention*Expressive Disclosure	0.19 *	0.07	2.55	**0.011**	0.04 – 0.33
1-Month*Expressive Disclosure	0.08	0.07	1.15	0.252	–0.06 – 0.23
2-Month*Expressive Disclosure	–0.01	0.07	–0.08	0.938	–0.15 – 0.14
Post-Intervention*Expressive Helping	0.24 **	0.07	3.27	**0.001**	0.09 – 0.38
1-Month*Expressive Helping	0.11	0.07	1.49	0.136	–0.03 – 0.25
2-Month*Expressive Helping	0.04	0.07	0.60	0.547	–0.10 – 0.19
Random Effects					
σ^2	0.07				
$\tau_{00\ subjectid}$	0.27				
ICC	0.79				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.029 / 0.793				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Table 22

Results of Multilevel Linear Model Analysis for Avoidance-Oriented Coping by Condition and Time

	b	*SE b*	*t*	*p*	*CI*
(Intercept)	2.24 ***	0.07	33.65	**<0.001**	2.11 – 2.37
Post-Intervention	–0.10	0.06	–1.71	0.088	–0.21 – 0.01
1-Month	–0.11	0.06	–1.87	0.062	–0.22 – 0.01
2-Month	–0.12 *	0.06	–2.07	**0.039**	–0.24 – –0.01
Expressive Disclosure	–0.09	0.09	–0.95	0.340	–0.27 – 0.09
Expressive Helping	–0.08	0.09	–0.90	0.368	–0.27 – 0.10
Post-Intervention*Expressive Disclosure	0.04	0.08	0.46	0.648	–0.12 – 0.20
1-Month*Expressive Disclosure	–0.05	0.08	–0.57	0.566	–0.21 – 0.11
2-Month*Expressive Disclosure	–0.11	0.08	–1.29	0.199	–0.27 – 0.06
Post-Intervention*Expressive Helping	–0.02	0.08	–0.29	0.773	–0.18 – 0.14
1-Month*Expressive Helping	–0.10	0.08	–1.25	0.211	–0.26 – 0.06
2-Month*Expressive Helping	–0.09	0.08	–1.08	0.281	–0.25 – 0.07
Random Effects					
σ^2	0.09				
$\tau_{00\ subjectid}$	0.17				
ICC	0.65				
$N_{subjectid}$	178				
Observations	668				
Marginal R^2 / Conditional R^2	0.035 / 0.659				

Note. SE = standard error, CI = 95% confidence interval, *$p < .05$ **$p < .01$ ***$p < .001$

Chapter 5: General Discussion

An overarching aim of this dissertation was to examine the factors that support individuals' adaptive emotional reflection and expression when they are confronted with highly challenging stressors (i.e., metastatic breast cancer, and grief over the death of a loved one). To this end, three related studies explored the contributions of three factors to the effects of emotional reflection and expression: psychological distance (adopting a less personal perspective regarding one's experiences; Liberman et al., 2007), universality (recognizing that one's experiences and associated emotions are shared by others; Yalom, 1995), and generativity (leveraging one's personal experiences to benefit others; McAdams & De St Aubin, 1992). Study 1 revealed that language indicating psychological distance in expressive disclosure essays written by women with metastatic breast cancer about their cancer experience predicted reduced depressive symptoms 3 months after engaging in the expressive disclosure intervention. Study 2 extended these findings, demonstrating that linguistic features associated with distanced language are perceived as reflecting psychological distance and also universality, demonstrating the distinct potential contribution of a sense of universality in reducing depressive symptoms following expressive disclosure.

Study 3 further expanded on these findings, evaluating an expressive helping writing intervention designed to encourage psychological distance, as well as universality and generativity, by coupling elements of expressive disclosure and a prosocial writing intervention in a sample of bereaved young adults. Specifically, participants in the expressive helping condition were instructed to write about their deepest thoughts and feelings surrounding their loss experience during the first two writing sessions and provide support to a recently bereaved young adult in the third and final writing session. The results revealed significant improvements

in the primary outcomes of well-being and grief-related distress relative to a fact-writing control condition and a traditional expressive disclosure condition. Psychological distance, universality, and generativity mediated the relationships between the intervention and these observed improvements, illuminating the mechanistic pathways through which the intervention provides beneficial effects. Collectively, these studies demonstrate that psychological distance, universality, and generativity are important factors in facilitating adaptive emotional reflection and expression, especially in the context of severe stressors. As noted in the discussion section of Study 3, in future research, I plan to apply the coding scheme from Study 1 to the essays written in Study 3 to evaluate whether the use of distanced language aligns with immediate post-writing ratings of psychological distance and universality. A concordance between participants' ratings of psychological distance and universality and scores derived from the coding scheme would lend further credibility to the notion that psychological distance and universality—as indexed by language use—play a significant role in the therapeutic benefits of expressive disclosure and expressive helping.

The results from Study 3 are particularly noteworthy in that the positive effects of the expressive-helping condition not only persisted but also became more robust at the 2-month follow-up. These promising results at the 2-month interval foreground the need for further longitudinal research to delineate the trajectory of these effects over an extended period. It remains an open, and crucial, question whether these effects will further intensify, stabilize, or wane over time. Thoroughly exploring this question is integral to fully understanding the long-term potential of the expressive-helping intervention. As such, this line of inquiry offers an enticing direction for future research, promising to shed light on the intervention's enduring impact.

Although Study 1 found that the use of distanced language in expressive essays predicted significant declines in depressive symptoms, Study 3 did not observe an overall effect of either expressive disclosure or the expressive-helping intervention on depressive symptoms (secondary outcome). It is worth noting that this apparent discrepancy aligns with the findings of the original study from which the essays for Study 1 were sourced (Low et al., 2010), in which there was no effect of experimentally induced expressive disclosure on depressive symptoms. This suggests that although the intervention may not have resulted in an overall reduction in depressive symptoms, specific elements such as distanced-language use could still play a vital role in other outcomes. As such, future research could investigate whether psychological-distance ratings immediately following writing sessions predict decreases in depressive symptoms at the 1- and 2-month follow-ups within the Study 3 sample, despite the lack of an overall effect of the combined expressive helping and expressive-disclosure intervention.

The enduring effects of the expressive helping intervention on well-being and grief-related distress suggest a significant shift in the individual's interpretation or reconstrual of the event, which is indicative of emotional processing (Foa, & Kozak, 1986). The process of meaning-making or deriving personal significance and understanding from experiences, especially traumatic or stressful ones, has been extensively documented in the literature as a crucial pathway to resilience and psychological growth (Davis et al., 1998; Janoff-Bulman & Frantz, 1997; Park, 2010). Indeed, psychological distance and universality help individuals place their experiences within broader, more universal contexts, and generativity allows leveraging them for the benefit of others, thereby transforming the narrative surrounding the event and contributing to its reconstrual. Accordingly, the results of these studies align with existing theoretical models, as well as the overarching framework of the current research (depicted in

Figure 1), suggesting that psychological distance, universality, and generativity promote adaptive emotional reflection and may do so through the promotion of emotional processing and meaning-making.

Although there are many ways to make meaning from challenging experiences, a strength of the expressive-helping intervention is that it appears to do so by encouraging psychological distance, universality, and generativity without explicit instruction to engage in these processes. Although the expressive helping writing intervention was rated as more effortful than writing about non-emotional information (i.e., the fact-writing control condition), other research has demonstrated that modulation of language use to consider experiences from different perspectives requires relatively little effort (Moser et al., 2017), particularly as compared to other strategies that aim to foster positive reconstrual or reappraisal through the use of cognitive strategies (Buhle et al., 2014). The relatively low cognitive burden of the expressive helping intervention, coupled with effects that encourage reduced self-focus via psychological distance and universality, may be particularly beneficial and well-received for individuals with anxiety and depression, who often struggle with heightened self-focus and impaired cognitive control networks responsible for managing negative affect (Brockmeyer et al., 2015; Erk et al., 2010; Johnstone et al., 2007; Mor & Winquist, 2002). Future research could, therefore, further explore the utility of the expressive helping intervention in clinical populations experiencing markedly elevated depression or anxiety. Notably, studies could compare expressive helping to writing interventions that explicitly instruct engagement of cognitive strategies for emotion regulation (e.g., benefit finding, reappraisal) to measure the perceived effort involved, considering the relevance of cognitive demand within these populations. Furthermore, it would be valuable to

assess the efficacy of the intervention in promoting effective emotion regulation and mitigating persistent, heightened negative emotions that are often characteristic of these groups.

The findings of this series of studies, coupled with the existing literature (Ruini & Mortara, 2022; Spencer & Petersen, 2020; Walton & Wilson, 2018) may inform further writing intervention development that leverages the context and instructions of expressive disclosure to encourage psychological distance, universality, and generativity. For example, instructing individuals to write about their experiences for their past, current, and future selves across the writing sessions may promote temporal psychological distance from the event, encourage detachment from personalization, and demonstrate how emotions and perceptions of events change over time, allowing for less fusion with thoughts and feelings immediately surrounding the event. Normalizing the experience in the task instructions may foster universality, emphasizing that many people face similar challenges and that it is common to experience a range of emotions in these situations. Including brief examples or stories of others who have faced similar circumstances in the instructions may further help individuals recognize the commonality of their experiences and associated emotions. Generativity may be promoted in future expressive-helping research by highlighting the potential for individuals' experiences to benefit others in the writing instructions, suggesting that sharing their stories may provide comfort or guidance to those in similar circumstances. Incorporating peer sharing and feedback might enhance feelings of universality and generativity by allowing individuals to read others' experiences and provide social feedback, which may increase feelings of generativity by providing observable effects of helping others.

The potential for online platforms to facilitate expressive disclosure, peer support, and social feedback presents exciting opportunities for intervention development. However, creating

a safe, nonjudgmental environment for open and honest expression would require careful monitoring to ensure confidentiality and respect for all participants. Future research may explore the aforementioned strategies for increasing psychological distance, universality, and generativity in more detail, assessing the efficacy of interventions designed with these elements in mind and examining the potential synergistic effects of these elements.

The findings of this series of studies bolster existing theoretical frameworks and provide a deeper, more nuanced understanding of the specific mechanisms that contribute to the effects of emotional reflection and expression. These studies suggest that psychological distancing, universality, and generativity represent modifiable psychological processes that can facilitate positive adjustment and mitigate the negative impacts of chronic stress on mental health outcomes when effectively leveraged through targeted interventions. This research highlights the dynamic and malleable nature of these processes, underscoring their potential as key targets of future interventions aimed at fostering resilience and promoting well-being in the face of significant stressors.

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Appendices

Appendix A

General Coding Rules

Your coding must be completely independent of the other coders. It is essential that we can accurately measure how your coding corresponds to everyone else's coding. Please do not talk to the other coders about any of the essays or about any particular coding decision you make.

These essays are very personal and carry sensitive information. Do not talk to anyone about what you are reading, as these essays are confidential. After we are finished coding, we will hold a roundtable discussion to talk about our experiences with coding and the emotions and thoughts they generated.

Overview of Coding Procedure

Practice Phase

During this phase, coders become familiar with the coding scheme. The coding team will then code examples of psychological distancing from previous studies and discuss areas of agreement or disagreement until a consensus is reached. The coding scheme is refined during this process: all coders should take notes while coding and contribute to the improvement of the coding manual.

Coding Phase

Each essay is coded by propositions. Each line in the spreadsheet represents one proposition. You should only code propositions that are understandable, even when incomplete, or act as a causal prepositional construction such as "because. . . ." *Note*: when you are making coding decisions, it helps to compare the text statement to the coding category definition in this coding manual. It is particularly helpful to do this when you first start coding the essays.

Proposition Coding

The essays are divided into propositions (i.e., clauses). All clauses that are understandable have been broken into propositions. Incomplete clauses that are not understandable are included on the coding sheet but should be considered uncodable.

Temporal Perspective

To complete this step, identify which of the following temporal perspectives is represented in the proposition. Each perspective can be identified using the following guidelines.

Present perspective. All propositions that include forms of present tense verbs*, aside from indefinite* (see below), should be coded as present perspective.

Indefinite perspective. The indefinite perspective does not indicate whether a verb is complete, ongoing, or routine (e.g., he goes to school). It is often used to indicate facts or universal truths. For instance, "the sun rises in the east" and "water boils at 100 degrees Celsius" are examples of the indefinite present tense. Context is key to determining this perspective. You may ask yourself, is this action described as habitual or routine? Would adding "from time to time" to the end of the proposition maintain the verb meaning? These are indicators of indefinite tense.

Past perspective. All forms of past tense should be coded as past perspective.

Future perspective. There are a number of different ways of referring to the future in English. Often, future tense verbs are used to refer to a time "later than now." However, there are several other ways to talk about the future without using a future verb tense (e.g., going to, will be). For example, one might use hypothetical statements to discuss the future. One might also use the present tense verb to discuss the future (e.g., "I'm meeting him later"). Context clues can

help you determine whether a proposition invokes future perspective; therefore, you should not rely on verb tense alone for coding this perspective.

Multiple perspectives. Sometimes proportions may include multiple tenses. When this occurs, it is often due to the use of an idiom or informal language. To code these propositions for tense, determine which tense appears most crucial to the proposition *meaning*. For example, "Not to mention, I haven't been in the best of moods," should be coded as *past* tense even though "mention" is in present tense. This is because "not to mention" is an idiom, whereas the latter part of the phrase conveys the meaning.

Grammatical Subject

To complete this step, identify the grammatical subject of the proposition (i.e., the person, place, thing, or idea that is doing or being something). Locate the verb and ask, "Who or what 'verbs'/'verbed'?" *Note*: be careful to distinguish between subjects and direct/indirect objects when completing this step. The subject is the thing doing the verb, whereas the object gives meaning to the verb. For example, in the sentence, "Tom purchased the apple from Mike," the apple and Mike are both objects that provide meaning and context for the verb "purchase."

Personal subject. If the subject is a specific noun or pronoun (e.g., I, he, they, you, we), code it as personal. For example, consider the following clauses: (a) "The grapes were still on the vine." Here, the subject, "grapes," indicates a specific noun. (b) "They were not quite ripe." Here, we know the subject, "they," refers to the specific bunch of grapes. Therefore, "they" acts as a personal subject. This specification is key to identifying the personal perspective.

Impersonal subject. An impersonal subject, by contrast, does *not* indicate a specific noun. Pronouns such as "it," "everyone," "one," or "anyone" are commonly used as impersonal subjects. An example of impersonal pronoun use may include the following statements: "It's

fine," or "It's never easy." Other examples of impersonal pronouns include "no one," "everyone," "it," "nobody," and "anybody," among many others. Sometimes people use the word "they" as an impersonal pronoun. For example, the sentence, "They say change is coming," does not identify to whom "they" refers and is therefore impersonal. The pronoun "you" can also be used as an impersonal subject. For example, when Forrest Gump says, "Life is like a box of chocolates; **you** never know what **you're** going to get," he uses the pronoun "you" as an impersonal subject to refer to people in general (

Grammatical Subject Coding

Self-subject. Code any references to the self as the subject of a proposition, including first person singular and plural pronouns as self-subject.

Specific other subject. Any propositions that use another identifiable person as the subject (e.g., Bob, Betty, my husband) should be coded as specific other. He/she may also be coded as specific other if used reflexively (i.e., to avoid sounding redundant).

Multiple specific others subject. Any propositions that use two or more other identifiable people as the subjects (e.g., Bob and Betty, my coworkers) should be coded as multiple specific others. "They" may also be coded as multiple specific others if used reflexively.

Inanimate subject. Propositions that reference an inanimate object, verb, or intangible subject (e.g., the situation, my hair, her attitude) should be coded as an inanimate subject.

Special Situations

Reflexive Subjects

If the subject refers to a noun (including intangible things like "my faith" or "his friendship") that was unambiguously named in a prior proposition, code it as personal. For example, consider the following propositions: "My husband's support has been a blessing./It is

the only thing getting me through this." Here, the subject, "it," refers to her husband's support, a specific, previously stated noun. Therefore, "it" should be coded as personal in this case. Now consider these propositions: "My husband's support is the only thing getting me through this./It is still hard to get through this." In this case, "it" does not act as a reference to something previously stated. Therefore, "it" should be coded as impersonal.

Directives

Directives are used to issue a command or instruction, make a request, or offer advice. For example, "Please come in" is a directive. While these propositions are rare in expressive writing essays, you may encounter a few directives throughout your coding.

Coding directive subjects. The subject of a directive is always the second person (i.e., you); however, it is often implied. For example, the sentence "(You) sit down," or "(You should) sit down," are both directives. However, they could be written with or without a grammatical subject. Always code these sentences as specific other subject.

Coding directive temporal perspective. Verb tense and temporal perspective may be particularly difficult to code for directives. When coding these propositions for tense, it can be helpful to imagine that you are witnessing the writer have a conversation with the reader, and you should consider the time period being discussed.

Appendix B

Unaltered and Translated Essays (Study 2)

Essay 1

Unaltered

I feel deeply that I am a survivor. I have many mixed emotions (ups and downs) regarding the breast cancer, but I truly believe I will beat it. I have heard that there are people who never really have a remission but continue to survive in spite of that. I heard something about "chronic cancer" which means never getting a cure, for example start getting better with treatment and then like me the tumor gets "smart" and begins to out wit the treatment, so we need to something new. This describes perfectly what is happening to me. But feeling as I do that I am a survivor and a strong person I remain positive most of the time. I try filling my time with other things and yesterday from eleven-thirty in the morning till five in the evening I sat with my mom at the Emergency Room hospital where she was admitted with congestive heart failure, so this I am sure will fill any empty hours. She will be there 3 to 4 days- so hopefully can make Fathers' Day brunch. I had a treatment today and am feeling okay of course I am on steroids again, but I feel good and very positive. I have a goal to make now to see "Dirty Dancing" next year (June 2009) at the Pantages Theater. I do not want to put goals too far into the future because I think that makes me feel a little bit hopeless, so short term goals feel better and seem more doable. In the mean time, I have many small goals (file for Social Security, grandson's birthday, mom's birthday) to get me to next year and the play/musical. All in all right now I feel positive and will try to hold this feeling. Of course I realize there will be bumps in the road and there are no guarantees in life but as long as I find happiness in each day and maintain my sense of humor I think I am good. I look forward to seeing my friends at work tomorrow and find out what all is new there (another distraction- bless them) since there are many changes going on there now. I will be getting ready soon to go to the hospital shortly to check on mom and get updates. This all helps me maintain and not dwell on any negatives. I think when I dwell on the negative thoughts it tends to depress me and I do not want to go there.

Second Person

When you feel deeply that **you are** a survivor**, you** have many mixed emotions (ups and downs) regarding the breast cancer, but **you** truly believe **you** will beat it. There are people who never really have a remission but continue to survive in spite of that. Something about "chronic cancer" which means never getting a cure, for example start getting better with treatment and then the tumor gets "smart" and begins to out wit the treatment, so **you** need to something new. This describes perfectly what is happening to me. But **when you feel** that **you** are a survivor and a strong person **you** remain positive most of the time. **You** try filling your time with other things and yesterday from eleven-thirty in the morning till five in the evening I sat with my mom at the Emergency Room hospital where she was admitted with congestive heart failure, so this I am sure will fill any empty hours. She will be there 3 to 4 days- so hopefully can make Fathers' Day brunch. I had a treatment today. **You** feel okay when **you** are am on steroids. but I feel good and very positive. I have a goal to make now to see "Dirty Dancing" next year (June 2009) at the Pantages Theater. **You** do not want to

put goals too far into the future because that makes **you** feel a little bit hopeless, so short term goals feel better and seem more doable. In the mean time, it's good to have many small goals (file for Social Security, grandson's birthday, mom's birthday) to get you to next year. All in all when **you** feel positive and **you** try to hold this feeling. Of course there will be bumps in the road and there are no guarantees in life but as long as **you** find happiness in each day and maintain **your** sense of humor **you are** good. I look forward to seeing my friends at work tomorrow and find out what all is new there (another distraction - bless them) since there are many changes going on there now. I will be getting ready soon to go to the hospital shortly to check on mom and get updates. This all helps me maintain and not dwell on any negatives. When **you** dwell on the negative thoughts, it tends to depress **you**, and **you** do not want to go there.

Essay 2

Unaltered

Sometimes I feel like cancer rules my life. I do not necessarily dwell on it in a negative way, but I always know it is there. I rearrange my work schedule to accommodate appointments. I try to make up hours if I feel up to it. I have burned through a lot of my paid time off because I took time off for my appointments or because I did not feel well. This upsets me. My "vacation" time (of which I desperately need) is being eaten up by cancer/chemotherapy related events. Sometimes, your fatigue prevents you from doing things that you enjoy or want to do. I have spent the whole weekend in bed because I was so tired. This angers and upsets me. I have things to do! And I do not want to spend the rest of my life in bed. I hate to think of that happening especially because if I did not have much time in life. Cancer, or having it, makes you stop and think about making big decisions or changes in life. I have just recently decided to move into an apartment of my own. I will live closer to work but farther from my family. I have questioned whether or not I could take care of myself. My sister has done a lot of the cooking and she lifts heavy things for me sometimes. Also, if I am knocked down or ill from the chemotherapy she is there to check on me. But, my need to "live" as I want to live helped me realize that I cannot be afraid or assume that things are going to take a turn for the worse. I am going to move forward and live life just like anyone else. I will deal with whatever issues that come my way. I have been doing that since being diagnosed. It is hard sometimes to take those steps forward when you have serious illness with you wherever you go. I was originally looking for an apartment close to a hospital and my treatment center. I wanted to be prepared if or when I needed it. I will be relatively close to both of those places. My new places has a good neighborhood that I can walk and exercise in. I am not far from the health food store. Instead of focusing on the more negative aspects of my situation, I decided to create opportunities for positive situations. There is always a constant challenge to fight and keep surviving. Otherwise it is easy to feel down and hopeless. This can really wear on you emotionally, physically, and spiritually.

Second Person

Sometimes **you** feel like cancer rules your life. **You** do not necessarily dwell on it in a negative way, but **you** always know it is there. **You** rearrange your work schedule to

accommodate appointments. **You** try to make up hours if you feel up to it. I have burned through a lot of my paid time off because I took time off for my appointments or because I did not feel well. This upsets me. My "vacation" time (of which I desperately need) is being eaten up by cancer/chemotherapy related events. Sometimes, fatigue prevents **you** from doing things that **you** enjoy or want to do. I have spent the whole weekend in bed because I was so tired. This angers and upsets me. I have things to do! And I do not want to spend the rest of my life in bed. I hate to think of that happening especially because if **you do** not have much time in life. Cancer, or having it, makes you stop and think about making big decisions or changes in life. I have just recently decided to move into an apartment of my own. I will live closer to work but farther from my family. I have questioned whether or not I could take care of myself. My sister has done a lot of the cooking and she lifts heavy things for me sometimes. Also, if I am knocked down or ill from the chemotherapy she is there to check on me. But, **the** need to "live" as **you** want to live **helps you** realize that **you** cannot be afraid or assume that things are going to take a turn for the worse. **You have to** move forward and live life just like anyone else. **You** deal with whatever issues that come **your** way. **You** have **to do** that since **you're** diagnosed. It is hard sometimes to take those steps forward when you have serious illness with you wherever you go. I was originally looking for an apartment close to a hospital and my treatment center. I wanted to be prepared if or when I needed it. I will be relatively close to both of those places. My new places has a good neighborhood that I can walk and exercise in. I am not far from the health food store. Instead of focusing on the more negative aspects of **your** situation, **you can** decide to create opportunities for positive situations. There is always a constant challenge to fight and keep surviving. Otherwise it is easy to feel down and hopeless. This can really wear on you emotionally, physically, and spiritually.

Essay 3

Unaltered

I wonder if I was in a different spot with my breast cancer metastasis if I would feel differently. Would I be angry? Would I be depressed? I do not know what the answer to those questions would be. I only know now is I feel good most of the time and do not dwell on my future in negative thoughts. Do not get me wrong. I do have my down days. But these usually come with the news that someone I am acquainted with is having difficulties or has died. It especially is upsetting for me to hear she is leaving young children. Even though I hate the idea of my 21 year old daughter losing me at least she is of an age that she does not need a mother as a constant companion in her life. When I get angry it is at the death of a friend. Why is it they (science) can fly to the moon, build technical items and such and not find a cure or at least a better therapy for cancer? I know it takes time and money, but I wonder if there are therapies out there that are not being used due to financial issues or kept out of reach to people because the cost it prohibitive. I sometimes wonder if there are secrets that we do not know anything about yet. Is there a cure... Having cancer has brought my husband and me closer together. I truly know he loves me. I have lost my breasts, female organs, and gained a lot of weight due to the breast cancer, chemotherapy, medication, menopause, and stress. He still finds me attractive and tells me daily that he loves me. I am very fortunate to have a man in my life that loves me as he does. I only hope that every

woman has someone in their life that is as special as my husband. He has been wonderful in every aspect of my therapy and I know he will be there for me in the end. I only know that coming closer to death has made me look around more and find the beauty, kindness, and the love around me. I do stop and smell and touch the flowers. I love to watch the birds flying about especially the hummingbirds. I live in a healing and peaceful Recreational Vehicle resort when we are not traveling. When we do travel, I look at the area in awe. I see, hear, and feel the beauty. I hope I do this till the end. I love my life and do not want to leave it for a very long time. This is my journey. Everyone on our planet has their journey- breast cancer metastasis is mine.

Second Person

You wonder if **you were** in a different spot with **your** breast cancer metastasis if **you** would feel differently. Would **you** be angry? Would **you** be depressed? **You** do not know what the answer to those questions would be. **You** only know now **you** feel good most of the time and do not dwell on the future in negative thoughts. Do not get me wrong. **You** do have **your** down days. But these usually come with the news that someone **you** are acquainted with is having difficulties or has died. It especially is upsetting when **you** hear she is leaving young children. Even though I hate the idea of my 21 year old daughter losing me at least she is of an age that she does not need a mother as a constant companion in her life.When **you** get angry it is at the death of a friend. Why is it they (science) can fly to the moon, build technical items and such and not find a cure or at least a better therapy for cancer? I know it takes time and money, but **you** have to wonder if there are therapies out there that are not being used due to financial issues or kept out of reach to people because the cost it prohibitive. **You** sometimes wonder if there are secrets that we do not know anything about yet. Is there a cure...Having cancer has brought my husband and me closer together. I truly know he loves me. **You** lose your breasts, female organs, and gain a lot of weight due to the breast cancer, chemotherapy, medication, menopause, and stress. He still finds me attractive and tells me daily that he loves me. I am very fortunate to have a man in my life that loves me as he does. **You** would only hope that every woman has someone in their life that is as special as my husband. He has been wonderful in every aspect of my therapy and I know he will be there for me in the end. **You** know coming closer to death makes **you** look around more and find the beauty, kindness, and the love around **you**. **You** can stop and smell and touch the flowers. I love to watch the birds flying about especially the hummingbirds. I live in a healing and peaceful Recreational Vehicle resort when we are not traveling. When **you** do travel, **you** can look at the area in awe. **You** can see, hear, and feel the beauty. I hope I do this till the end. I love my life and do not want to leave it for a very long time. This is my journey. Everyone on our planet has their journey- breast cancer metastasis is mine.

Appendix C

Writing Instructions and Prompts (Study 3)

General Instructions

In this study, you will be asked to complete a writing session once per week for the next 3 weeks. Each session will take 20 minutes to complete.

Before you begin each week, we would like you to find a quiet, uninterrupted time to complete the writing. A writing prompt will be provided before each session. There is no need to worry about grammar, spelling, or sentence structure. The only rule is that you write continuously for the entire 20 minutes. If you run out of things to say, you can simply repeat the things you have already written. Your responses will not be directly linked to your identifiable information, so feel free to write openly and honestly about your experience.

Writing Instructions (before every session)

Group 1: Expressive Disclosure

For some bereaved young adults, writing about the experience of grief may be beneficial. Though everyone's experience is different, many types of people benefit from writing about an emotionally painful experience, regardless of whether they have written about their experiences before or consider themselves good at writing.

We are asking bereaved young adults to write about their experiences of grief through a series of personal writing sessions. During each session, you will be asked to write about your deepest thoughts and feelings about your loss experience. Individuals coping with bereavement experience a full range of emotions. Please feel free to focus on any and all of them. Your writing will **NOT** be shared with anyone other than the researchers.

Please write about your experience for only yourself. There is no need to explain or clarify any of your responses. At the end of the study, you will have the option to receive your written responses.

Group 2: Expressive Helping

For some bereaved young adults, learning about others' experiences of grief may be beneficial. Though everyone's experience is different, many types of people benefit from learning about shared emotionally painful experiences. In addition, some bereaved young adults find it helpful to write about their experiences with loss, regardless of whether they have written about their experiences before or consider themselves good at writing.

We are putting together a collection of writings and advice that can be used as a resource for newly bereaved young adults. The first two writing sessions are designed to help you understand and organize your thoughts and feelings about your loss experience. During these sessions, you will be asked to write about your deepest thoughts and feelings about your loss experience. Individuals coping with bereavement experience a full range of emotions. Please feel free to focus on any and all of them. Your writing from the first two sessions will **NOT** be shared with anyone other than the researchers.

In the final writing session, you will be asked to provide advice and support to a recently bereaved young adult who is similar to you in terms of age, gender, and type of loss experienced. Your responses from this writing activity will be deidentified (i.e., removed of all identifiable information) and provided as a resource to newly bereaved young adults. At the end of the study, you will have the option to receive your written responses.

Group 3: Fact Writing Control

For some bereaved young adults, writing about their everyday experiences may be beneficial. Research shows that many types of people benefit from writing, regardless of whether they have written about their experiences before or consider themselves good at writing.

We are asking bereaved young adults to document their daily experiences through a series of writing activities. You will be asked to provide factual details about everyday experiences. Your writing will **NOT** be shared with anyone outside of the researchers. You can provide as much or as little detail as you would like.

Please write about your experience for only yourself. There is no need to explain or clarify any of your responses. At the end of the study, you will have the option to receive your written responses.

Weekly Writing Activities

Group 1: Expressive Disclosure

Weeks 1-3

Please write about your deepest thoughts and feelings regarding the time when you lost a loved one, including how you felt, what thoughts you had, and how it impacted your life at the time. Please include details about what you went through, including both the good and bad parts of your experience. Remember to write for only yourself.

Here are some questions to get you started: What emotions did you experience during this time? What were some of the changes that occurred to your day-to-day life during this time? How did you cope with these changes? What concerns or hopes did you have? How did those around you deal with the loss? What do you wish someone had told you about the loss? In what ways did the loss impact your relationships with your family, friends, classmates, romantic partner, and/or coworkers?

Remember, please write continuously for the next 20 minutes.

Group 2: Expressive Helping

Weeks 1-2

Please write about your deepest thoughts and feelings regarding the time when you lost a loved one, including how you felt, what thoughts you had, and how it impacted your life at the time. Please include details about what you went through, including both the good and bad parts of your experience. Remember to write for only yourself. You will be asked to provide advice and support to a recently bereaved young adult in the third and final writing session.

Here are some questions to get you started: What emotions did you experience during this time? What were some of the changes that occurred to your day-to-day life during this time? How did you cope with these changes? What concerns or hopes did you have? How did those around you deal with the loss? What do you wish someone had told you about the loss? In what ways did the loss impact your relationships with your family, friends, classmates, romantic partner, and/or coworkers?

Remember, please write continuously for the next 20 minutes.

Week 3:

Please provide advice and support to a recently bereaved young adult who is similar to you in terms of age, gender, and type of loss experienced. Feel free to write about any aspect of your experience and include details about things you think a recently bereaved young adult would benefit from knowing, including both the good and bad parts of your experience. Remember as you write that your story will be a resource to help recently bereaved young adults. Overall, it might help to think about what you wish you had known.

Here are some questions to get you started: Looking back on your loss, how do you view that time in your life now? How has this experience shaped who you are now? Did your experience change your plans for the future and, if so, how? What are some of the difficulties that you face due to the loss? What are some of the ways that you cope with difficult thoughts and emotions regarding your experience?

Remember, please write continuously for the next 20 minutes.

Group 3: Fact Writing Control

Week 1:

Today, we would like you to describe your daily routine for getting ready for the day in the morning. Think about the steps that you go through each morning prior to starting your day (e.g., getting dressed, brushing your teeth, drinking coffee, eating breakfast), and then write about these different steps. We would just like you to think back and walk us through this process, describing the details of what you do during this time. Please try to focus on the details of what you do as you get ready for the day (e.g., turning on a light, preparing breakfast, turning on the shower) as opposed to who you are typically with or what you are typically thinking about during this time. Use this writing session as an opportunity to paint a detailed picture of what you do on a typical morning, including as much specific information as you can recall.

Week 2:

We are likely to do something a little different each day. In this writing session, we would like you to describe your day yesterday, starting from the moment you woke up to the moment you went to sleep. Think about all of the little steps that you took throughout the day, including deciding what to wear, brushing your teeth, walking to your car, and eating several meals. Please try to focus on the factual details of your day rather than on who you were with or what you were thinking. You can structure your

writing any way you want but try to include as much specific information about your day as you can recall.

Week 3:

This week, we would like you to describe your daily routine for getting ready to go to sleep at night. Think about the steps you go through each night before falling asleep (e.g., getting changed, brushing your teeth, washing your face, reading, watching TV), and then writing about these different steps. We would just like you to think back and walk us through this process, describing the details of what you do during this time. Please try to focus on the details of what you do as you get ready to go to sleep (e.g., pulling back the covers, turning on a fan, turning off a light) as opposed to who you are typically with or what you are typically thinking about during this time. Use this writing session as an opportunity to paint a detailed picture of what you do before going to sleep, including as much specific information as you can recall.