Randomized Controlled Trial of SecondStory, an Intervention Targeting

Posttraumatic Growth, with Bereaved Adults

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Abstract

Objective: People often report positive psychological changes after adversity, a phenomenon known as posttraumatic growth (PTG). Few PTG-focused interventions have been rigorously tested, and measurement strategies have had significant limitations. This study evaluated the effects of a new group-format psychosocial intervention, *SecondStory*, aimed at facilitating PTG by helping participants make meaning of the past and plan a purposeful future. **Method:** In a randomized controlled trial, adults ($N = 112$, 64% women) bereaved within five years were randomly assigned to SecondStory or an active control, expressive writing. The primary outcome, PTG, was measured using two contrasting methods: the Posttraumatic Growth Inventory, which asks participants retrospectively how much they believe they have changed due to struggling with adversity, and the Current-Standing Posttraumatic Growth Inventory, which tracks quantifiable change in participants' standing in PTG domains over time. Secondary outcomes included depression symptoms, posttraumatic stress symptoms, and life satisfaction. Outcomes were measured at two-week intervals: pre-test, post-test, and three follow-up occasions. Hierarchical linear modeling was used to assess whether SecondStory participants experienced greater gains in primary and/or secondary outcomes over the eight-week trial. **Results:** Results indicated that SecondStory participants did not show significantly greater improvements than control participants on measures of PTG, posttraumatic stress, or life satisfaction, but did show greater decreases in depression symptoms by the first follow-up. **Conclusions:** These findings suggest that SecondStory may not facilitate PTG more effectively than existing interventions, but may be promising for addressing depression. Positive interventions may productively be refined to support people experiencing trauma and loss.

Keywords: posttraumatic growth; meaning-making; depression; bereavement

Public health significance:

- This study highlights the potential of positive psychology interventions to support mental health after serious adversity.

- Results suggest that although SecondStory may not foster posttraumatic growth more than existing interventions do, it may be a promising approach for addressing depression symptoms in adults who have lost a loved one.

- These findings suggest that bereaved adults showing mild/subclinical distress may experience increases in self-perceived posttraumatic growth and decreases in posttraumatic stress after participating in either expressive writing or SecondStory.

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"There is a crack in everything. That is how the light gets in."

–Leonard Cohen, "Anthem"

Adversity can lead to great suffering and also, for some, to positive transformation. In the past two decades psychology researchers have turned their attention toward this potential for transformation, studying the related phenomena of posttraumatic growth (PTG; Tedeschi & Calhoun, 1996), stress-related growth (Park, Cohen, & Murch, 1996), and benefit-finding (Helgeson, Reynolds, & Tomich, 2006). Existing psychosocial interventions, from cognitive-behavioral stress management to expressive writing, can foster PTG even though they were not originally designed to specifically target it (Roepke, 2015; Wagner et al., 2016; Zang, Hunt, & Cox, 2013). Recently, several PTG-focused interventions have been developed, but few have been rigorously evaluated in randomized trials so far (e.g., Dolbier, Jaggars, & Steinhardt, 2010; Shakespeare-Finch et al., 2014). SecondStory is a new group-format intervention specifically designed to foster PTG and well-being in the wake of adversity (in this study, bereavement specifically). Here we report the findings of the first randomized controlled trial (RCT) evaluating SecondStory.

Posttraumatic Growth Interventions

Despite rich traditions of cultivating personal growth in therapy (Ellis, 1991; Fava & Ruini, 2003; Roepke, 2015; Rogers, 1961; Seligman, Rashid, & Parks, 2006), there is little research evidence illuminating how to systematically facilitate PTG. Calhoun and Tedeschi (1999, 2013) have described how clinicians can promote PTG within a traditional therapy context, for instance by using Socratic questioning (i.e., asking open-ended questions to help

4

clients find their own answers) to help clients develop new views of vulnerability and strength, and by coaching clients in emotion regulation and constructive rumination. Similarly, Tedeschi and McNally (2011) have proposed general components for PTG-focused interventions: (a) psychoeducation to help clients understand the trauma response, (b) emotional regulation training, (c) constructive self-disclosure, (d) creation of a new trauma narrative that includes growth themes, and (e) development of new life principles. Such concepts have also been incorporated into a recent PTG-focused self-help workbook (Tedeschi & Moore, 2016).

Recently, intervention researchers have developed and evaluated programs that specifically target PTG and/or related constructs such as meaning (i.e., making sense of life events and finding purpose) and resilience (i.e., preserving or quickly restoring good functioning following adversity). For example, *Transforming Lives Through Resilience Education* (TLTRE; Dolbier et al., 2010) is a primarily cognitive-behavioral intervention that uses psychoeducation, cognitive restructuring, themes of personal responsibility, and social support to promote stress-related growth. In an RCT, undergraduate students who took part in TLTRE showed greater gains in Post-Traumatic Growth Inventory (PTGI) scores compared to a waiting list, with a treatment-on-treated effect of $d = .64$. *Promoting Resilient Officers* (PRO; Shakespeare-Finch et al., 2014) is a resilience intervention with PTG content that draws on cognitive-behavioral and interpersonal therapies to promote coping skills and social support. In a randomized trial comparing PRO to psychoeducation, PRO's effect on PTGI scores fell short of conventional levels of statistical significance but pointed in the hypothesized direction. Other interventions targeting PTG, meaning, and/or resilience have shown promise for fostering growth when tested with pretest-posttest designs; these include the *Life Tape Project* (Garlan et al., 2010), *Psycho-Spiritual Integrative Therapy* (Garlick, Wall, Corwin, & Koopman, 2011), the *Life Review*

Group (Vincent, 2010), the *Posttraumatic Growth Path* (Nelson, 2011; Yeagle, 2015), and an intervention for individuals with chronic mental illness focused on benefit-finding (i.e., noticing positive changes arising from the struggle with adversity; Chiba, Miyamoto, & Harada, 2016). A benefit-finding intervention for caregivers of individuals with dementia has also been tested in an RCT; intervention participants showed greater benefit-finding than control participants, with an open-ended prompt asking participants to qualitatively describe positive gains (then quantified by coders) rather than with a reliable, validated scale (Cheng, Fung, Chan, & Lam, 2016). It is not the case that all psychosocial interventions foster PTG: for instance, null results have been reported in a pretest-posttest trial evaluating *Managing Cancer And Living Meaningfully* (Lo et al., 2014) and in an RCT evaluating an internet-based self-efficacy intervention for health and human services workers indirectly exposed to trauma (Cieslak et al., 2016).

These evaluations have made important contributions to our understanding of the facilitation of PTG. They also point to potential methodological improvements for further research. First, more RCTs are needed given the limitations of the pretest-posttest designs predominantly used thus far. Second, existing PTG intervention trials have relied on retrospective self-report measures of growth, most frequently the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). Such measures have been criticized on the grounds that they might reflect participants' ongoing coping efforts, attempts to be socially desirable, and/or self-deception rather than genuine growth (Frazier et al., 2009; Jayawickreme & Blackie, 2014). Retrospective scales such as the PTGI rely on the assumption that participants are able to recall prior trait levels accurately. However, such an assumption is inconsistent with research examining the relationship between self-reports of change and prospective change: Multiple studies have found that self-reports of perceived change are typically not strongly

indicative of the ways in which individuals change over time according to prospective measures (e.g. Frazier et al., 2009; Robins, Noftle, Trzesniewski, & Roberts, 2005). On the other hand, there is research supporting the validity of retrospective measures of PTG: Multiple studies have reported that close loved ones corroborate individuals' perceptions of their own growth (e.g., Blackie, Jayawickreme, Helzer, Forgeard, & Roepke, 2015; Park et al., 1996; Shakespeare-Finch & Enders, 2008), and that PTG is largely unrelated to social desirability (Salsman, Segerstrom, Brechting, Carlson, & Andrykowski, 2009; Weinrib, Rothrock, Johnsen, & Lutgendorf, 2006; Wild & Paivio, 2004). Aside from questions of construct validity, retrospective assessments of PTG may have functional utility (i.e. predict improved mental health), although the evidence remains mixed (e.g. Engelhard, Lommen, & Sijbrandij, 2014; Helgeson et al., 2006).

Thus we not only need to refine PTG interventions, but also to more rigorously evaluate them using control groups and nuanced measurement strategies. As alluded to above, there is currently some disagreement among researchers as to whether PTG is primarily a subjective appraisal made by individuals after adversity (and is thus adequately measured with the PTGI), or quantifiable changes in well-being and/or personality (and thus requires changes to be tracked with appropriate current-standing scales such as the Current-standing PTGI; C-PTGI). Moreover, these two measures (PTGI and C-PTGI) have demonstrated different relations with distress, with post-event PTGI scores related to greater distress and gains in C-PTGI scores related to lower distress (e.g., Frazier et al., 2009). It is unclear from existing research whether PTG interventions facilitate only subjective perceptions of PTG, or also pre-post differences in current-standing measures of PTG. As both facets of PTG are important to understand, both are measured in this study so that they can be compared and contrasted, with an eye to providing further clarity on which processes PTG interventions are likely to impact. Relatedly, it is important to assess

whether other outcomes such as depression and PTSD symptoms are impacted by PTG-focused interventions in order to explore the potential adaptive significance of PTG and to inform decisions about the overall value of PTG-focused interventions.

Theoretical and Empirical Foundations of the SecondStory Intervention

SecondStory is a new group-format intervention developed to foster PTG and well-being after adversity. Its roots are planted in four areas of research: positive psychology, future-directed thinking (e.g., prospection, goal-setting, and hope), meaning-making, and narrative therapy. By incorporating these diverse literatures, we sought to conceptualize and potentially enhance PTG in a comprehensive manner. In particular, we drew on literatures that value both how people understand their own lives, as well as how people act in their own lives, in line with our efforts to include different conceptions of PTG (as described above).

Positive psychology. Positive psychology is the scientific study of human flourishing and the conditions that enable it (Seligman & Csikszentmihalyi, 2000). Rather than focus on the narrow concept of happiness, this field focuses on the broader concept of well-being — all that makes life worth living (Seligman, 2012). Well-being is therefore about more than *hedonia* (pleasure); it is also about *eudaimonia* (living a virtuous, purposeful, excellent life) (Ryff & Singer, 2008). Because well-being is multifaceted, some facets of well-being may be high while others are low (as a dashboard shows multiple indicators that may vary in level; Forgeard et al., 2011). This conception of well-being has important implications for interventions that aim to help people in the wake of loss and trauma. Even if trauma causes one facet of well-being to plummet, the other facets can remain stable or even rise; in particular, hedonic elements may decrease while eudaimonic elements increase. For instance, a person might experience many negative emotions during/after a crisis while also deriving great meaning and feeling deeply

connected to others. In keeping with this, PTG can be conceptualized as gains in engagement, relationships, meaning, and accomplishment – an increase in eudaimonic well-being that can occur even as a person struggles with painful emotions (Joseph & Linley, 2005). SecondStory aims to increase eudaimonic well-being rather than directly targeting painful emotions (and as such, requires a different outcome measurement approach than traditional clinical interventions).

Future-directed thinking. Humans constantly engage in prospection (the mental representation of possible futures) and this helps us to solve problems, regulate emotions, and effectively plan for the future (Gilbert & Wilson, 2007; Seligman, Railton, Baumeister, & Sripada, 2013; Taylor, Pham, Rivkin, & Armor, 1998). Relatedly, research on hope theory indicates that hopeful thinking (i.e., deriving pathways to desired goals and motivating oneself via agency thinking to use those pathways) is linked to better adjustment and higher achievement (Snyder, 2002). Hopeful future-directed thinking is highly relevant to trauma and growth. Traumas and losses can rob individuals of the positive futures they had previously counted on, and produce a sense of hopelessness and foreshortened future (American Psychiatric Association, 2013). Adversity can also present new possible futures: some people are able to look past the doors that are closing to see new doors that are opening – and such people are more likely to report PTG (Roepke & Seligman, 2014). The prospective theory of posttraumatic growth posits that a sense of new possibilities is not just a domain of PTG, but a key mechanism by which growth occurs (Roepke & Seligman, 2014). Positive future-directed thinking is a key element of SecondStory, an intervention approach that not only aims to help people make sense of the past but also construct a purposeful and positive future. The intervention utilizes key empirical findings from research on hope and prospection: for instance, visualizing a positive future can be useless or even harmful if one does not also visualize the route to achieving this

positive future, and so SecondStory emphasizes planning and visualizing specific routes toward goals (Oettingen, Hönig, & Gollwitzer, 2000; Taylor et al., 1998).

Meaning-making and positive rumination. Meaning is a key part of eudaimonic well-being; the good life is not just about feeling good, but rather feeling that life is worthwhile and serves a greater purpose (King & Napa, 1998; Ryff & Singer, 2008; Seligman & Csikszentmihalyi, 2000; Steger, Frazier, Oishi, & Kaler, 2006). Meaning-making can also enable individuals to better cope with adversity: when people successfully find a reason why life remains worthwhile after tragedy, they are less distressed (Park, 2010).

In making sense of crises, people can use the same set of facts to construct different meanings. One person might ruminate about how some people have hurt and disappointed her during a crisis and conclude that people are terrible and life worthless (interpretations characteristic of depression and PTSD); in contrast, another person might reflect about how some people have supported and inspired her during a crisis and conclude that people can be wonderful and life meaningful (interpretations characteristic of PTG). We make, and change, the meaning of an event as we ruminate on it. Rumination typically refers to the intrusive, repetitive, negative, unproductive brooding linked to depression and anxiety (Nolen-Hoeksema, 2000), but deliberate, thoughtful, and productive self-reflection (termed *positive rumination*) is linked to greater PTG (Lindstrom, Cann, Calhoun, & Tedeschi, 2013).

In light of this research on meaning-making and reflection, SecondStory aims to offer participants a context for making meaning of their struggles; structured reflection and discussion are used to guide participants in trying out different meanings. The facilitator not only stimulates reflection but also constrains it, using structured activities and questions to increase the likelihood of positive rumination and decrease the likelihood of negative rumination.

Narrative therapy. Narrative therapy is a counseling style based on re-authoring/re-storying, using stories to interpret, connect, and make sense of the events in one's life (Morgan, 2000; Weingarten, 1998). The central role of narrative is obvious in interventions like Narrative Exposure Therapy (NET; Schauer, Neuner, & Elbert, 2005), but Wilson (2011) has argued that narrative is also key across diverse interventions. Many of the most effective psychosocial interventions, he argues, work through *story-editing* (cuing people to invoke particular stories to understand their lives).

Similarly, narrative strategies could be a powerful tool for increasing PTG: by strategically suggesting specific stories, clinicians may influence how people make sense of the ways that difficult experiences fit into their pasts, present, and future. When reflecting on adversity, a person can use the same facts to tell different stories: a story of ruin and despair versus a story of pain, redemption, and transcendence. In SecondStory, facilitators validate participants' stories of grief and struggle while inviting them to consider coexisting (i.e. not mutually exclusive) stories of growth and hope.

The SecondStory intervention. The body of research described above (positive psychology, future-directed thinking, meaning making, and narrative therapy) was integrated into a group-format psychosocial intervention aimed at helping individuals experience greater psychological growth, greater well-being, and less distress after adversity. Given that SecondStory was developed in parallel with other PTG-focused interventions described above, it did not directly draw from existing PTG interventions (nor was it designed to directly contrast with them). Areas of overlap with existing PTG-oriented interventions include guided reflection/reconsideration of priorities, meaning, and life philosophy; use of narrative; and an emphasis on cultivating social support. Differences can be found in both the content of the

intervention (e.g., SecondStory's emphasis on future-thinking with activities such as backward imaging, described below) as well as the process of the intervention: SecondStory does not use a psychoeducation approach, distinguishing it from interventions that teach participants about trauma response, PTG, or emotion regulation/coping skills. Indeed, the term *posttraumatic growth* appears nowhere in the intervention materials or protocol and participants receive little direct instruction about skill-building. Rather than teaching participants about PTG, SecondStory emphasizes experiential learning through the use of hands-on activities, multimedia, and debriefing/discussion of these (as outlined below), with the intent to create a supportive environment in which participants can come to their own realizations about growth.

SecondStory may also be compared and contrasted with bereavement/grief interventions, particularly given that participants in this trial were recruited because of bereavement. Bereavement interventions span a wide range of approaches, as described in a systematic review highlighting the "excessive theoretical heterogeneity" and "stultifying between-study variation" in the field (Forte, Hill, Pazder, & Feudtner, 2004, p. 3). Bereavement-focused psychotherapies may use cognitive-behavioral, psychodynamic, interpersonal, supportive/person-centered, and/or other approaches, and their theories and techniques sometimes differ markedly from those of interventions addressing trauma or other stressful life events (Forte et al., 2004). Evidence on the effectiveness of bereavement interventions has been mixed, and a meta-analytic summary suggested they have a small effect ($d = .16$) at posttreatment and no significant benefit ($d = .05$) at later follow-up (Currier, Neimeyer, & Berman, 2008). The diversity of interventions makes it difficult to summarize how all these therapies differ from SecondStory, but the core distinction is that SecondStory does not focus directly on participants' losses, or on their relationship with the lost loved one. SecondStory was not developed to address bereavement specifically, but rather

adversity generally. As such, SecondStory does not include features such as psychoeducation about grief, detailed discussion of the loss, imaginal conversations with the deceased loved one, or reminiscence activities (as found in complicated grief treatment) (Shear, Frank, Houck, & Reynolds, 2005). When participants are asked to reflect and speak about their loss, this happens within a strengths-based framework (e.g., participants are asked to share a story about how they showed or developed a character strength in responding to loss). Similarities include a focus on pursuing meaningful life goals, an aim shared with complicated grief treatment, cognitive-behavioral therapies, and other modalities.

      Evaluating SecondStory. The RCT reported here tested the efficacy of SecondStory compared to an established intervention, expressive writing (Pennebaker, 1997). Expressive writing was chosen to serve as an active (not inert), conservative control as it has been shown to have multiple benefits including improved mental health, physical health, and PTG (Frattaroli, 2006; Roepke, 2015). A greater number of writing sessions (3+) is related to greater effect sizes (Frattaroli, 2006), but effects on PTG have been observed with as few as one 30-minute session of expressive writing/disclosure (Slavin-Spenny et al., 2011). Expressive writing's impact on PTG ranges from null to an effect size $d = .34$, with an average of $g = .26$ (Roepke, 2015), with these trials typically using 1-3 sessions of writing. Expressive writing was chosen as the control condition both for ethical reasons (i.e. to offer an established beneficial intervention to bereaved and distressed participants, rather than measurement-only) and due to practical constraints (i.e., it was only feasible to use a brief, self-directed intervention that would not require the involvement of therapists with high levels of training and allegiance to a particular psychotherapy).

Hypotheses. We hypothesized that SecondStory participants, in comparison to expressive writing participants, would experience greater improvements in PTG (both PTGI and C-PTGI scores), depression, and life satisfaction. We also planned to test for any potential differences in PTSD symptoms between conditions, without an a priori hypothesis.

Method

Participants

The study was advertised with flyers (posted at local clinics, businesses, street corners, and university dorms and libraries), online announcements (posted on www.craigslist.org and a university research webpage), and through word-of-mouth (via emails to friends and colleagues). Eligible participants were adults aged 18 or older who had lost a loved one within the past five years, but no more recently than three months ago. Although SecondStory was developed to address varied forms of adversity, bereavement was chosen as the focus for this trial because: (a) it is a prevalent form of adversity (and an important one in past PTG research); (b) selecting participants with similar experiences of adversity would allow for greater cohesion and relatedness within the SecondStory groups. Individuals with extremely recent bereavement (less than three months) were excluded to reduce the risk that an immediate intervention would interfere with natural recovery processes (e.g., McNally, Bryant, & Ehlers, 2003). Individuals were excluded if they reported high levels of depression or PTSD symptoms, or frequent suicidal ideation (see below) since this study was not conducted as a form of psychological treatment; if they reported that they had been diagnosed with a psychotic disorder; or if they did not live close enough to the research site to attend sessions.

Individuals who saw the study flyer/announcement and were interested in taking part contacted the research team. They were then sent an online screening survey using the platform

www.Qualtrics.com. Of those who completed the screening, 63.56% were eligible and of those, 71.34% consented; see Figure 1 for participant flow diagram. A priori power analyses, completed using the software G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007), indicated that at least 98 participants would be needed to detect a small effect by final follow-up in a repeated-measures design testing a within-between interaction (e.g., a *Time*Condition* interaction), assuming α error probability of 0.05, power (1 - β error probability) of 0.80, and a correlation of 0.60 among repeated measures. An adequate number of participants ($N = 112$) successfully enrolled in the study during the recruitment period. Participants were randomly assigned to either the intervention or control group using a number sequence generated with the website www.randomizer.org. Participants were compensated with Amazon.com gift cards (at the rate of $90 for full-day intervention sessions, $15 for booster sessions, $25 for control condition sessions, and $10 per survey). All participants, as well as ineligible individuals who reported high levels of distress, were offered referrals (e.g., for therapy, medication, support groups, and other paid studies). All study activities were approved by the university's Institutional Review Board.

Measures

     Screening measures. Two well-established measures were used for screening. First, the PTSD Checklist - Civilian Version (PCL-C) was used to measure PTSD symptoms over the previous month (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). A cut-off score of 44 suggests clinically significant PTSD symptoms among civilians with trauma exposure (Wilkins, Lang, & Norman, 2011) and those who exceeded this cut-off were screened out. Second, the Patient Health Questionnaire-9 (PHQ-9) was used to measure frequency of depression symptoms over the previous 2 weeks (Kroenke, Spitzer, & Williams, 2001). Here a cut-off of 20 suggests

severe depression symptoms and those who exceeded this cut-off were screened out. In addition, those who endorsed frequent suicidal ideation (scores of 2 or 3 on item 9) were screened out.

Primary outcome: Posttraumatic growth. PTG was assessed in two ways in this study. First, we used the standard Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996). This measure asks respondents to consider 21 items across five PTG domains (e.g., "I appreciate every day more"), and to use a six-point Likert scale to rate how much change they have experienced as a result of their struggle with adversity. As such, it assesses a subjective sense of one's own growth. The PTGI demonstrated good reliability here (with α values of .95 to .96), and the expected positive correlations with life satisfaction, well-being, and social support ($r =$ .30, .36, .29) and inverse correlation with depression ($r = -.19$) supported the PTGI's validity.

We also used the Current-standing PTGI (C-PTGI), an adapted version that retains the same 21 possible manifestations of PTG (for example, appreciating each day), but simply asks respondents to report on their current standing in each of these areas, using a six-point Likert scale (Frazier et al., 2009).[1] The C-PTGI does not ask respondents to assess how much they have changed, but simply how they are doing in a given area at a given point in time, thereby allowing the researcher to directly compare the respondent's functioning across time. In this way the C-PTGI addresses some limitations of the original instrument, and represents increases in eudaimonic well-being rather than a subjective sense of having grown through adversity. Scores on the C-PTGI demonstrated good reliability in the present sample (with α values of .90 to .95), and the expected positive correlations with life satisfaction and well-being ($r = .52, .73$) and inverse correlations with depression and PTSD symptoms ($r = -.37, -.22$) supported the C-PTGI scores' validity.

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[1] We are grateful to Dr. Patricia Frazier for providing the C-PTGI for use in this study.

Secondary outcomes. Additional secondary outcomes were targeted in this RCT: (a) depression symptoms, assessed with the PHQ-9; (b) PTSD symptoms, assessed with the PCL-C; (c) life satisfaction, measured with the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), a well-established measure of cognitive and affective evaluations of one's life as a whole; (d) psychological well-being, measured with the Ryff Scales of Psychological Well-Being 54-item version (Ryff-54; Ryff, 1989). This longer measure presented the greatest participant burden and had high rates of missing data (78%-88%, depending on time point) along with model convergence problems and so is excluded here.

Additional measures. Additional measures were administered to characterize the sample and to examine secondary research questions in future analyses.[2] Participants reported basic demographic characteristics (age, gender, educational attainment, religion), personal goals, daily behaviors, and details about their bereavement (how long ago the loved one passed away, the nature of the relationship with the deceased loved one, how upsetting the death was, and if the death met Diagnostic and Statistical Manual-IV criteria for trauma, i.e., violent, sudden, and/or a result of suicide; American Psychiatric Association, 2000).

Procedure

Data collection procedure. Participants completed a similar battery of measures at five time points, approximately two weeks apart, starting with a pre-test administered roughly two weeks before the intervention or control activity; measurement occasions were 2 weeks prior to the intervention, immediately post-intervention, 2 weeks post, 4 weeks post, and 6 weeks post. All screening, pre-test, and follow-up data were collected using Qualtrics survey software. Post-test data were collected in paper-and-pencil format directly after participants finished the intervention program at the university.

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[2] These included measures of personality, social support, and coping.

Randomization procedure. Upon consenting, participants were randomly assigned to either the intervention or control group using a pre-established sequence of numbers generated with the tool randomizer.org. Different study personnel enrolled participants vs. randomized them to condition. The randomized number sequence was constrained such that for every 12 participants, 6 would be allocated to each condition; this allowed for timely formation of intervention cohorts and roughly equal numbers of intervention participants per session.

Intervention procedure. Participants randomized to the intervention condition took part in the new group-format intervention, SecondStory. The intervention was delivered to nine groups of 3-5 participants at [institution name] in a condensed format, with each group session lasting six hours (in a single visit) and with an optional one-hour booster session offered two weeks later. All group sessions were led by one or two (of three) Ph.D. candidates in clinical psychology, with support from research assistants and supervision/consultation from a licensed psychologist. Group facilitators followed the SecondStory protocol, leading participants through seven modules (see Table 1 for intervention information): (1) *Stories* (using stories to make meaning of the past and plan for the future); (2) *Strengths* (identifying strengths forged through adversity; (3) *Worldviews* (exploring changes in worldview after adversity); (4) *Relationships* (understanding and creating changes in relationships after adversity; (5) *Prospection* (identifying new possibilities for the future); (6) *Goals* (setting and pursuing goals); (7) *Closing* (integrating what was learned during the intervention and writing a message to future participants).

For each module, the facilitator(s) led an experiential activity and/or presented material (e.g., through videos or brief lectures) and then guided participants through individual reflection and partner-based or group-based discussion about the topic. For example, this is how facilitators led the *relationships* module (4): First, facilitators introduced the idea that relationships can

become strengthened and/or weakened during times of adversity. Next, they showed a video in which a woman described how her own relationships changed after a loss. Then, they guided participants in building three-dimensional models of (a) how their social networks have changed since their losses and (b) how they would like their social networks to change in the future. After that, facilitators invited participants to discuss these changes with a partner, to identify the behaviors that can strengthen their relationships, and to explore how they wish to support their own family/friends in the future.

Approximately two weeks after the SecondStory session, participants returned for an optional one-hour booster session. The session began with general discussion of participants' reflections on the intervention and their progress in their goal pursuits, and then consisted of practicing a *backward imaging* activity in which participants imagined having already reached an important goal, as well as the process of working toward it, as described in the SecondStory protocol (see Table 1; see Erickson, 1954).

Control procedure. Control participants individually completed a 30-minute expressive writing activity following the standard prompt created by Pennebaker (1997), which invites the participant to write freely about their deepest feelings and thoughts about the event in question. This served as an active (not inert) and conservative control condition, given that RCTs testing expressive writing have documented multiple benefits including improved mental health, physical health, and PTG (Frattaroli, 2006; Roepke, 2015).

Fidelity rating procedure. SecondStory facilitators were trained to carry out the intervention with fidelity: they read the protocol, received in-person training and rehearsal of select modules, observed at least one full SecondStory session before facilitating, and debriefed with the protocol writer (first author) and the licensed clinical supervisor/consultant after each

group session. Group sessions were audio recorded for later fidelity rating, with 98.6% of

modules yielding recordings with adequate sound quality. Fidelity rating guides were created at

the outset of the RCT. For each module, facilitators were rated on 4 - 8 *intervention factors* (i.e.,

inclusion of the key components of each module, with more factors for modules with more

content) and 7 *facilitator factors* (i.e., non-specific factors such as warmth). Yes/no (1/0) ratings

for each factor were added to yield a summary rating (*poor, barely adequate, good, excellent*) of

intervention factors and of facilitator factors, for every module. Two undergraduate research

assistants were trained to provide fidelity ratings based on recordings, and multiple interrater

reliability meetings were conducted. Their interrater reliability was assessed using percentage

agreement and the Cohen's kappa statistic.

Data Analytic Strategy

      Preparatory analyses. Preparatory analyses were conducted using IBM SPSS software

(version 22.0). We first examined the data distributions, checked that the assumptions of our

intended analytic methods were met, and tested for differences in demographic and/or

psychosocial variables across conditions at baseline using one-way ANOVAs and chi-square

tests. We also used chi-square tests to examine whether retention differed across conditions,

and whether those who were retained differed from those who were not. Missing data were

addressed using maximum likelihood estimation.

      We also assessed possible cohort effects. The SecondStory intervention (unlike the

control activity) was conducted in a group format. Therefore participants' data points could not

be assumed to be independent and it was necessary to test for significant heterogeneity in PTG

outcomes across the nine cohorts. Three-level (repeated measures nested within individuals

nested within cohorts) and two-level (repeated measures nested within individuals) unconditional

means models were compared for each outcome to assess the extent of non-independence

between cohorts. The three-level models did not show significantly better fit than the two-level

models according to likelihood ratio tests: CPTGI $\chi(1) = .23$, $p = .63$; PTGI $\chi(1) = 1.09$, $p = .30$;

PHQ-9 $\chi(1) < .001$, $p = .99$; PCL-C $\chi(1) < .001$, $p = .99$. In addition, the average number of

participants per group was small (3-5), which minimizes the impact of group effects. In light of

this, we proceeded with the two-level models described below (rather than formally accounting

for cohort effects in a three-level model) for parsimony and interpretability.

Hierarchical linear modeling (HLM) of changes in PTG over time. A series of HLM

analyses were conducted using R statistical software (nlme package). This intent-to-treat

analysis modeled changes in each outcome measure (e.g., C-PTGI, PTGI, PHQ-9, PCL-C,

SWLS) over time. The following equation represents the basic HLM framework used here:

Level 1 (within individual):
$PTG_{ti} = \pi_{0i} + \pi_{1i}(Time_{ti}) + \varepsilon_{ti}$
Level 2 (between individuals):
$\pi_{0i} = \beta_{00} + \beta_{01}(Intervention_i) + \zeta_{0i}$
$\pi_{1i} = \beta_{10} + \beta_{11}(Intervention_i) + \zeta_{1i}$

Time was centered at pretest (i.e., the intercept) and dichotomous variables were coded

1/0 to allow for meaningful evaluation of parameter estimates. Intervention effects were

evaluated by examining the *Time*Condition* interaction, which reflects group differences in

improvement over time and is represented by the beta coefficient associated with intervention

condition predicting the slope in the Level-2 submodel (β_{11}). The expressive writing condition

served as the reference group (i.e. it was coded 0). Covariates were not used in the models

reported here. Sensitivity analyses were conducted: (a) controlling for participants' use of

medication or psychotherapy during the trial; and (b) including only those individuals who

attended the assigned SecondStory/expressive writing intervention (treatment-on-treated

analysis). All fixed effects were similar so these are reported only briefly below. We calculated effect sizes (Cohen's *d*) for between-group changes in the primary outcome using the procedure recommended by Feingold (2009), which involves computing the difference between the estimated means of the two groups at the study's end (based on the coefficient for the slope difference and study length) divided by the baseline standard deviation. Similarly, we calculated within-group effect sizes (*d*) by computing the difference between estimated means at two points (based on slope coefficients and study length) divided by the group's baseline standard deviation.

For some outcome measures, basic linear modeling of change over time appeared to be inappropriate because the raw data showed nonlinear patterns, which suggested inflection points at theoretically meaningful periods in the trial (e.g., a change in the direction of scores after the intervention or after the booster session). In these cases, we compared Akaike information criterion values for a basic linear model (as described above) versus a piecewise linear model (allowing for two different slopes, before and after the inflection point) and retained the better model based on a combination of model fit and theoretical considerations.

Results

Participants' Baseline Characteristics

Participants ($N = 112$) were recruited between July 2014 and September 2015. Of those enrolled, 88.39% were retained at pre-test, 78.57% attended their scheduled intervention/control activity, and 66.96% completed the final follow-up survey (see Figure 1). There were no significant differences between those retained vs. lost at the final follow-up, but there were differences between those retained vs. lost at the point when the intervention/control activity was to be delivered: those who attended their scheduled activity reported closer relationships with the deceased loved one, $t(109) = -2.35$, $p = .02$. Retention was also higher among those assigned to

expressive writing rather than SecondStory, χ^2 (1, $N = 112$) = 5.30, $p = .02$, perhaps due to the more flexible scheduling offered to expressive writing participants (who could come to the site at any time rather than attend pre-scheduled group sessions).

Table 2 provides detailed information about participants' demographic and psychosocial characteristics at baseline. A majority (72%) of participants reported deaths meeting DSM-IV criteria for trauma (i.e., suicide, homicide, or sudden death). On the whole, the sample reported mild depression, with a mean PHQ-9 score of 5.35 ($SD = 3.47$). The sample's average level of PTSD symptoms ($M = 30.32$, $SD = 7.43$) was below the PCL-C's diagnostic cut-off of 44, but nonetheless suggested distress (corresponding to endorsing "moderate" difficulty with 10 of 17 symptoms). Overall, participants reported moderate PTG at baseline, with a mean score (52.02, $SD = 23.88$) slightly lower than those reported in other studies of bereaved people (e.g., Engelkemeyer & Marwit, 2008; Shakespeare-Finch & Armstrong, 2010). Compared to SecondStory participants, expressive writing participants were younger, $t(110) = -2.55$, $p = .01$, and more extraverted, $t(97) = 2.19$, $p = .03$.

Intervention Fidelity

Group facilitators showed good fidelity to the SecondStory protocol. Both trained raters indicated that group leaders' fidelity to the protocol was "good" or "excellent" overall for each cohort. The two raters showed a high degree of interrater reliability. Percentage agreement ranged from 91.1% - 100% for all modules. Kappa values, too, suggested moderate agreement or higher (0.49 - 1.00, $p < .0001$) in all modules but one. In that case (module 3), the Kappa value was not statistically significant ($\kappa = -.01$, $p = 0.94$), it contrasted with 97.5% agreement in ratings, and it appeared to be driven by the very rare occurrence of 0 ratings in that module (Feinstein & Cicchetti, 1990).

Primary Outcome

Changes in current-standing PTG. Contrary to prediction, neither expressive writing nor SecondStory participants showed statistically significant gains in C-PTGI domains over the course of the trial (*Time* coefficient = .08, p = .89; *Time*Condition* coefficient = 1.10, p = .23). The between-groups effect size of d = .33, a small effect, favored SecondStory (the hypothesized direction).[3] The within-group effect size of d = .29 suggested modest changes in the SecondStory group from baseline to final follow-up, in contrast to a within-group effect size of d = .02 in the expressive writing group. See Figure 2A for changes in C-PTGI scores over time.

Changes in retrospective self-perceived PTG. Participants in both conditions showed immediate increases in PTGI scores. Participants' PTGI scores followed a non-linear pattern, best represented by a piecewise hierarchical linear model: participants in both conditions showed significant increases in PTGI scores immediately after the SecondStory or expressive writing activity concluded (*Time$_A$* coefficient = 6.72, p < .001) and no significant changes from that point to the final six-week follow-up (*Time$_B$* coefficient = -.89, p = .36). Contrary to prediction, SecondStory participants showed no significant difference compared to expressive writing participants (*Time*Condition$_A$* coefficient = -2.24, p = .45): expressive writing participants gained 6.72 points on the PTGI (within-group d = .28) whereas SecondStory participants gained 4.48 points (within-group d = .20). At the final six-week follow-up the groups did not significantly differ, with an effect size of d = .14 favoring SecondStory. See Figure 2B for changes in PTGI scores over time.

Secondary Outcomes

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[3] When demographic covariates (specified a priori) were added to the model to reduce error variance, fixed effects were similar but statistical significance neared conventional levels, p = .08.

Changes in depression. SecondStory participants showed significantly greater improvement in depression symptoms compared to expressive writing participants. PHQ-9 scores followed a non-linear pattern, best represented by a piecewise model: participants in SecondStory showed significantly greater decreases in their PHQ-9 scores two weeks after the intervention concluded (*Time*Condition$_A$* coefficient = -1.23, $p < .001$, between-groups effect size $d = .38$), with a non-significant trend toward increased PHQ-9 scores by the final follow-up six weeks later (*Time*Condition$_B$* coefficient = .72, $p = .13$, between-groups effect size $d = .01$). The within-group effect size $d = .82$ suggested a large drop in depressive symptoms among SecondStory participants by the first follow-up. Expressive writing participants showed no such significant short-term decrease (*Time$_A$* coefficient = -.22, $p = .36$, within-group $d = .13$). See Figure 2C for participants' PHQ-9 scores over time.

Changes in PTSD symptoms. Participants in both conditions showed linear decreases in PTSD symptoms over the course of the trial (*Time* coefficient = -1.23, $p = .001$). There were no significant differences between the two conditions (*Time*Condition* coefficient = .06, $p = .92$, between-groups $d = .04$ at final follow-up). By the final follow-up, both groups showed medium-to-large improvements in symptoms, with within-group effect sizes of $d = .65$ (SecondStory) and $d = .64$ (expressive writing). See Figure 2D for participants' pattern of PCL-C scores over time.

Changes in satisfaction with life. Neither SecondStory participants nor expressive writing participants showed statistically significant changes in life satisfaction. The pattern of SWLS scores was best represented by a piecewise hierarchical linear model: scores showed a trend toward increasing two weeks after the intervention (*Time$_A$* coefficient = .71, $p = .07$; *Time*Condition$_A$* coefficient = .82, $p = .16$, $d = .18$ favoring SecondStory) and no significant change from that point to the final follow-up (*Time$_B$* coefficient = -.05, $p = .91$; *Time*Condition$_A$*

25

coefficient = -.84, *p* = .15, *d* = .07 favoring expressive writing). The initial upward trend in

SWLS scores in the SecondStory group was a medium-sized effect (within-group *d* = .47),

compared to a small effect in the expressive writing group (within-group *d* = .19).

Sensitivity analyses. Two sensitivity analyses were conducted: (a) use of medication or

psychotherapy was added to the model as a level-2 covariate, and all fixed effects were similar to

those reported above in direction, magnitude, and statistical significance; (b) a treatment-on-

treated analysis was conducted such that participants who did not attend expressive writing or

SecondStory sessions were excluded, and all fixed effects were similar to those reported above in

direction, magnitude, and statistical significance.

Discussion

The findings of this RCT suggest limited benefits of the SecondStory intervention:

bereaved adults who participated in SecondStory showed significantly greater improvements in

depression symptoms compared to participants who did expressive writing (though this effect

was not maintained through the final follow-up). SecondStory participants and expressive

writing participants showed comparable increases in self-perceived PTG and decreases in PTSD

symptoms. Neither group showed significant improvements in life satisfaction.

Contrary to prediction, SecondStory did not appear to foster PTG more effectively than

expressive writing in the present sample. PTG was assessed in two ways and showed two distinct

patterns of results. When retrospective, self-perceived PTG was measured, participants in both

conditions showed increased PTG immediately after their participation in SecondStory or

expressive writing, and gains were maintained through the final follow-up. (The flat, rather than

upward, trajectory in this maintenance phase may be related to ceiling effects on the PTGI; see

Taku, Iimura, & McDiarmid, 2017). This is consistent with prior literature suggesting that a

diverse array of psychosocial interventions (including PTG-oriented interventions like TLTRE; Dolbier et al., 2010) can foster self-perceived PTG particularly if it is assessed immediately after an intervention (Roepke, 2015). When PTG was measured with the C-PTGI, representing quantifiable changes in well-being over time, neither SecondStory nor expressive writing participants showed statistically significant gains, although the effect size of $d = .33$ favored SecondStory (and the effect neared statistical significance at $p = .08$ when a priori demographic covariates were included, suggesting that with a larger sample size and/or more precision in measuring covariates, the effect may have been significant). Given the field's renewed emphasis on interpreting effect sizes and not only statistical significance (Kelley & Preacher, 2012), it is worth noting that this non-significant effect was comparable to the meta-analytic effect size of $g = .36$ representing the average impact of existing interventions on PTG (Roepke, 2015). There are important methodological differences between the present RCT and those included in the meta-analysis: Previous trials used retrospective self-report PTG measures, and half of the included trials compared active interventions (including expressive writing) to inert controls (such as waiting lists). In contrast, the present trial used an active control group – expressive writing – previously found to influence PTG. SecondStory's effect size may have been larger (and statistically significant) if compared to an inert control. SecondStory's effect can also be compared to those of bereavement interventions, which tend to show smaller effects on depression and distress (a meta-analytic effect size of $d = .16$ at post-test compared to $d = .38$ at post-test here) (Currier, Neimeyer, & Berman, 2008).

Multiple factors may account for the pattern of results reported here. First, SecondStory may have led to a short-term decrease in depression because of common therapeutic factors (e.g., positive expectancy and social support) or various specific mechanisms that may or may not be

shared with other effective therapies (e.g., goal setting, meaning-making). Indeed, the debate about common vs. specific factors in therapy is ongoing (Laska, Gurman, & Wampold, 2014). Next, SecondStory – like expressive writing and a range of other interventions – might produce self-perceived PTG because of common factors that promote growth across therapeutic modalities (e.g., cognitive reframing), and/or because of a common tendency to attribute any sort of improvement to the struggle with adversity due to shared cultural narratives about how challenges make us stronger. Third, SecondStory may have failed to produce significant improvements in PTG domains or life satisfaction over time because (a) the intervention is simply not effective for this; (b) the study lacked adequate statistical power; (c) the study design featured use of an active control group (expressive writing) already known to influence PTG, rather than an inert control such as a waiting list, making this an especially rigorous initial test of a new intervention; (d) the C-PTGI (a measure *not* designed for clinical trials) might not be ideally suited to assess intervention outcomes over time, and may have been subject to ceiling effects in the present trial (given the high baseline scores); and/or (e) this specific sample (which excluded very distressed individuals) does not represent the population for which SecondStory might significantly impact PTG. In particular, it has been suggested that relatively resilient individuals (i.e., those who do not develop significant distress and/or impairment following adversity) may be the *least* likely to experience PTG (Westphal & Bonanno, 2007) and such individuals were overrepresented in this trial.

Implications for PTG Research

This RCT extends prior research by rigorously evaluating a new stand-alone, manualized intervention specifically designed to target PTG and well-being, and by testing its effect on adults with a clear history of significant adversity (bereavement). This trial points to the

importance of further refinement and evaluation of PTG interventions and the need to understand

common elements shared by diverse interventions that target and foster growth (Roepke, 2015).

This RCT also makes a unique contribution in measuring two facets of PTG: the

subjective perception that one has grown through adversity (PTGI scores) as well as quantifiable

changes in PTG domains over time (C-PTGI scores). By showing that these two outcomes

diverged, the present trial supports the idea that these two measurement approaches may be

capturing two distinct conceptualizations of PTG (i.e., highly subjective internal change in

worldview versus quantifiable changes in well-being and/or personality). Additionally, this trial

indicated that short-term changes in self-perceived PTG may not be accompanied by meaningful

changes measured longitudinally in PTG/well-being domains, which is relevant to debates about

the validity of self-perceived PTG and questions about whether interventions should prioritize

maximizing a subjective sense of meaning versus quantifiable changes over time (Boals &

Schuler, 2017; Coyne & Tennen, 2010; Zoellner & Maercker, 2006). Future PTG-focused RCTs

can build upon the measurement approach used here to better understand the relationship

between self-perceived growth and quantifiable changes in growth domains over time (as well as

other outcomes, such as distress).

Implications for Clinical Practice

These findings also have implications for clinical practice. First, they suggest that

SecondStory could be a useful approach in working with bereaved individuals exhibiting mild to

moderate symptoms of depression (including those whose difficulties persist several years after

the loved one's death), although SecondStory needs refinement to have more potent and longer-

lasting effects. The present data suggest that SecondStory can be implemented with high fidelity

by masters-level providers (here, doctoral students). These findings also point to potentially

helpful principles used in SecondStory and recommended by other PTG researchers: narrative, explicit reflection on life philosophies, disclosure to supportive others, a focus on strengths, guided meaning-making, future-focused thinking, and an emphasis on meaningful action.

Positive psychology interventions that use such principles could be an effective option for individuals who do not find traditional clinical approaches appealing (e.g., CBT for depression), or who may not be appropriate candidates for existing therapies. Individuals with subclinical depression symptoms often do not seek or obtain treatment, and yet may be at risk for reduced functioning (e.g., Horwarth, Johnson, Klerman, & Weissman, 1994). Opportunities to select from an array of intervention options may promote access and engagement for such individuals; those who are uncomfortable with the idea of mental health treatment may nonetheless take part in programming focused on well-being and growth.

Limitations and Future Directions

Several notable limitations constrain the conclusions we can draw from this trial. First, there are limits to the study's internal validity. The intervention condition involved more time/attention than the control condition, as well as a group format that included opportunities for discussion and common factors like warmth; these factors could have influenced outcomes. The intervention facilitators were aware of the hypothesis that SecondStory would outperform expressive writing. Participants were not asked whether they believed they were in an intervention or control group. Also, retention varied by condition: participants were more likely to attend their scheduled activity if assigned to expressive writing, perhaps because this condition accommodated each individual's schedule whereas SecondStory was offered to the group on a fixed date. This pattern of non-random missing data could have influenced the present findings. Finally, several outcome measures (the C-PTGI, PTGI, and SWLS) were not developed for use

in clinical trials; future research should continue to examine whether these are appropriate for such contexts. The C-PTGI is the most recent and least established of these measures, and the ideal PTG measurement strategy remains an important (and controversial) area for further development (e.g., Johnson & Boals, 2015). The C-PTGI may prove most useful in true prospective studies in which individuals' functioning can be assessed before trauma occurs.

Second, there are limits to the study's external validity. This study recruited bereaved individuals (with a high proportion of traumatic loss), with mild to moderate symptoms of depression and PTSD. It is unclear whether/how the present findings would extend to people with varying levels of symptoms, or varying types of traumatic or non-traumatic stressors. As more distressed people tend to report greater self-perceived PTG (Shakespeare-Finch & Lurie-Beck, 2014), SecondStory's effects may differ in a more severe population. Relatedly, the study recruited people bereaved within five years but no more recently than three months ago. It is unclear how programs like SecondStory might impact people if delivered in the first months after loss/trauma – which is not necessarily recommended due to the risk of interfering with natural recovery processes that play out in the immediate aftermath of adverse events (McNally, Bryant, & Ehlers, 2003). Participants were compensated for their time taking part in the intervention, and the intervention was delivered in an atypical format (a six-hour session, which may be difficult to commit to), so findings may not generalize to traditional treatment settings. Additionally, this study recruited broadly via flyers and online announcements, and the motivations and characteristics of those who volunteered could have influenced their experience of the intervention. For instance, it may be that the people who participated were those who continued to struggle with their loss in the months or years after their loved one's death and/or may have been experiencing complicated grief, which is distinct from depression and PTSD and was not

specifically assessed here. Thus, the present findings may not generalize to bereaved or trauma-exposed populations more broadly.

The study is also limited by its timeframe: participants were followed for six weeks after the intervention, and it is unclear whether their gains were maintained, augmented, or lost over longer time spans. A previous meta-analysis indicated that PTG effect sizes are larger when measures are administered soon after the intervention is completed (Roepke, 2015). One strength of this RCT is that measurement extended beyond immediate post-test, including multiple follow-up points (a longer interval than some previous studies), and that HLM was used for modeling change over time; nonetheless, any longer-term impact of SecondStory or expressive writing is unclear based on these findings.

Despite these limitations, this trial contributes to PTG research by testing a stand-alone intervention designed to directly target PTG and well-being; by employing a multifaceted measurement strategy that can alleviate some concerns about self-perceived PTG; and by establishing SecondStory's apparent effect on depression symptoms (though these gains were not maintained). These contributions can be extended in future research. First, future analyses can shed light on how changes in positive variables (e.g., PTG) relate to changes in distress-related variables (e.g., depression and PTSD symptoms). Second, future work should explore whether SecondStory can be refined/augmented for more potent and durable effects, which would be important for justifying the increased time and resources required for SecondStory compared to brief interventions like expressive writing. Third, further research should identify which parts of SecondStory and other interventions are mechanisms for change (e.g., common factors like warmth and hope, intervention-specific content, light exposure to thinking of the event, etc.).

In conclusion, PTG-focused interventions hold promise for fostering recovery and well-being after adversity and they deserve to be rigorously evaluated. The present research is a step in that direction. These results suggest that SecondStory's primary benefit may not be to foster quantifiable changes in PTG domains measured over time, but rather to alleviate depression. These findings point to the need for further refinement/augmentation of SecondStory, in order to make its effects on depression more durable and to produce gains in other outcome domains (including PTG-related outcomes such as meaning in life). Future intervention research should continue refining PTG measurement strategies, identifying interventions' active ingredients, determining when and for whom these approaches are appropriate and useful, and exploring the relationship between alleviating distress and fostering growth/well-being. The aim of such PTG intervention research is not to negate or replace the traditional goals of psychological intervention but rather to expand the list of goals and explore additional paths toward building a life worth living. We need to better understand how to balance, sequence, and integrate these two approaches to maximize gains and help individuals to not only survive adversity, but also to thrive afterward.

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Table 1

Brief Guide to SecondStory Intervention Protocol

Module 1
Introducing the Participants and the Intervention
Participants' introductions and icebreaker; description of intervention; informed consent; brief lecture on using stories to understand life; *storycards* game (experiential activity about story creation).

Module 2
Personal Strength
Brief lecture on strengths; explanation of *strengths cards* (representing 28 character strengths); *strengths spotting* (video and discussion of strengths depicted); *strengths stories* (participants share how they used/developed strengths during their struggle with adversity and get supportive feedback).

Module 3
New Perspectives
Video on perspective-taking (depicting visual illusions that can only be understood when seen from a new perspective); guided discussion of how participants beliefs may have been "turned upside-down" and how their perspectives, priorities, and existential beliefs may have shifted.

Module 4
Deeper Relationships
Brief lecture on changes in relationships; *social circles* activity (experiential activity in which participants build 3-D models of changes in their social networks); guided discussion of how to strengthen relationships in aftermath of adversity; guided discussion of altruism born of suffering.

Module 5
New Possibilities
Brief lecture on opportunities to rewrite our lives and our future; *open doors* activity (drawing and/or writing about opportunities for the future); guided discussion of values, goals, and hopes.

Module 6
Planning a Purposeful, Positive Future I (Goal Setting and Planning)
Brief lecture on reformulation of SMART goals (Harris, 2009); completion of goal-setting worksheet; peer feedback on SMART goals; generation of steps to take and obstacles to overcome (Oettingen, Wittchen, & Gollwitzer, 2013); elicitation of public commitment to pursuing goal.

Module 7
Closing Activities
Discussion of what was learned; expression of appreciation for fellow group members; contribution to letter to future participants; receipt of supportive letter from past participants.

Module 8 (Booster)
Planning a Purposeful, Positive Future II (Backwards Imaging); Continuing Support
Discussion of insights/changes; reports on goal progress; backward imaging activity (Beck, 1970; Erickson, 1954; Miller & Berg, 1995); debriefing activity and revisiting plan for goal pursuit.

Table 2

Baseline Demographic and Psychosocial Characteristics of Sample

Demographic variables	SecondStory (*n* = 56)	Expressive writing (*n* = 56)	Entire sample (*N* = 112)
Age (*SD*)	33.66 (12.72)	27.95 (10.89)	31.51 (11.99)
Gender (% Female)	32 (57.14%)	40 (71.43%)	72 (64.30%)
Ethnicity & Race*			
Asian/Asian-American (%)	7 (14.58%)	4 (7.84%)	11 (11.11%)
Black/African-American (%)	15 (31.25%)	13 (25.49%)	28 (28.28%)
Hispanic or Latino (%)	3 (6.25%)	8 (15.69%)	11 (11.11%)
Native American (%)	1 (2.08%)	2 (3.92%)	3 (3.03%)
White/Caucasian (%)	23 (47.92%)	30 (58.82%)	53 (53.54%)
Other (%)	1 (2.08%)	2 (3.92%)	3 (3.03%)
Religion*			
Christian (%)	17 (35.42%)	14 (27.45%)	31 (31.31%)
Catholic (%)	6 (12.50%)	6 (11.76%)	12 (12.12%)
Muslim (%)	3 (6.25%)	3 (5.88%)	3 (3.03%)
Jewish (%)	4 (8.33%)	4 (7.84%)	8 (8.08%)
Buddhist (%)	3 (6.25%)	3 (5.88%)	6 (6.10%)
Hindu (%)	2 (4.17%)	1 (1.96%)	3 (3.03%)
Spiritual but not religious (%)	6 (12.50%)	9 (17.65%)	15 (15.15%)
Agnostic (%)	4 (8.33%)	5 (9.80%)	9 (9.09%)
Atheist (%)	6 (12.50%)	9 (17.65%)	15 (15.15%)
Other (%)	3 (6.25%)	3 (5.88%)	6 (6.06%)
Educational attainment*			
Less than bachelor's degree (%)	25 (52.08%)	21 (41.18%)	45 (45.45%)
Bachelor's degree (%)	13 (27.08%)	23 (45.10%)	36 (36.36%)
Graduate/professional degree (%)	10 (20.83%)	7 (13.73%)	17 (17.17%)
Psychosocial variables (instrument range) (Cronbach's α values)	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
PTSD symptoms[a] (17-85) (α = .79 - .92)	30.96 (7.18)	29.68 (7.68)	30.32 (7.43)
Depression symptoms[b] (0-27) (α = .73 - .90)	5.84 (3.53)	4.86 (3.37)	5.35 (3.47)
Life satisfaction[c]* (5-35) (α = .85 - .93)	20.50 (6.49)	20.96 (7.38)	20.74 (6.93)
Social support[d]* (12-84) (α = .90 - .94)	62.63 (16.04)	65.35 (13.28)	64.03 (14.67)
Retrospective PTG[e]* (0-105) (α = .95 - .96)	54.27 (23.61)	49.90 (24.17)	52.02 (23.88)
Current standing PTG[f]* (0-105) (α = .90 - .95)	70.46 (16.33)	69.43 (17.67)	69.93 (16.95)
Therapy use at baseline (%)	8 (14.29%)	4 (7.14%)	12 (10.7%)
Medication use at baseline (%)	5 (8.93%)	2 (3.57%)	7 (6.30%)
Prior therapy (%)	17 (30.36%)	18 (32.14%)	35 (31.25%)
Prior medication use (%)	8 (14.29%)	4 (7.14%)	12 (10.71%)
Bereavement variables			
Months since loss: mean (*SD*)	14.63 (10.33)	15.63 (12.90)	15.10 (11.55)
How upsetting (1-7 Likert): mean (*SD*)	5.91 (0.86)	6.04 (1.01)	5.97 (0.93)
Traumatic loss per DSM-IV criterion A: *n* (%)	41 (73%)	40 (71%)	81 (72%)

Note. *N* = 112. *Data available only for participants who completed pretest, when these measures were administered (*n* = 99). [a]PCL. [b]PHQ-9. [c]SWLS. [d]MSPSS. [e]PTGI. [f]C-PTGI. [g]Ryff-54.

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Figure 1. Participant flow diagram.

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Figure 2. Changes in outcome variables by condition (SecondStory vs. expressive writing) from pre-test to 6-week follow-up. Error bars represent +/1.96 *SE* of the mean. Trajectories are based on model parameter estimates (not raw data). *Time 1* = pretest, *Time 2* = immediate posttest, *Times 3, 4,* and *5* = biweekly follow-ups. (A) Trend favoring SecondStory is non-significant. (B) Increases from Time 1-2 are significant. (C) SecondStory's decrease from Time 1-3 is significant. (D) Decreases over time are significant.