

Broadening our Understanding of Adversarial Growth: The Contribution of Narrative**Methods**

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Broadening our Understanding of Adversarial Growth: The Contribution of Narrative**Methods****Abstract**

After adversity, individuals sometimes report adversarial growth - positive changes in their identity, relationships, and worldviews. We examined how narrative methods enhanced understanding of adversarial growth compared to standard questionnaires. Participants ($N = 411$) from college and community samples reported on their well-being, wrote a narrative about a highly challenging experience, and answered questionnaires on adversarial growth. Results showed that adversarial growth coded in narratives was positively associated with widely used self-report questionnaires of adversarial growth. Unexpectedly, narrative growth did not predict incremental validity in well-being outcomes compared to standard questionnaires. We found unique expressions of adversarial growth in a qualitative analysis of the narratives. We discuss the added value of using narratives for the assessment of adversarial growth.

Keywords: adversarial growth, posttraumatic growth, narratives, narrative identity

Broadening our Understanding of Adversarial Growth: The Contribution of Narrative

Methods

1. Introduction

Adversarial growth is defined by the positive changes that individuals may report in their identity, relationships, and worldviews after adversity (Linley & Joseph, 2005). Adversarial growth is a collective term that encompasses the more widely used term of post-traumatic growth (Tedeschi & Calhoun, 2004), and is preferable because it avoids misconceptions that the event has to be a clinical trauma to cause these changes¹. Adversarial growth was initially observed in clinical practice (Tedeschi et al., 1998). Before this point, both researchers and clinicians had focused on diagnosing and treating symptoms of distress caused by the trauma without acknowledging the capacity for personal growth (Joseph, 2012). Afterwards, researchers developed questionnaires that assessed the prevalence of adversarial growth and examined its association with indicators of distress and well-being (Joseph et al., 1993; Park et al., 1996; Tedeschi & Calhoun, 1996).

Although these questionnaires were important in advancing research, there have been several methodological critiques since their development. These critiques have concerned the retrospective measurement of change over time (Infurna & Jayawickreme, 2019; Jayawickreme & Blackie, 2014), and the framing of items and response scales for the potential to accentuate self-reports of adversarial growth (Boals & Schuler, 2018). The aim of this study was to examine how the collection and coding of individuals' narratives about distressing experiences could broaden our understanding of adversarial growth. We examined whether prioritising individuals' reports of their experiences in their own words would

¹ We note that stress-related growth (Park et al., 1996) is another alternative to post-traumatic growth. We prefer to use adversarial growth because it conveys the event should challenge aspects of identity, while avoiding the misconception that the event must be a clinical trauma.

predict well-being outcomes relative to questionnaire measures and allow for unique expressions of adversarial growth.

1.1 Questionnaire Assessment of Adversarial Growth

With few exceptions, questionnaires have been the dominant method for operationalizing adversarial growth, asking individuals to report on the extent of positive changes following an experience. The *Post-Traumatic Growth Inventory* (PTGI; Tedeschi & Calhoun, 1996) is the mostly widely used questionnaire (Boals et al., 2022), which contains 21-items, all positively worded, about five domains in which adversarial growth may be experienced. For example, individuals report the extent to which they have experienced “greater self-reliance” as a result of the distressing event from *not at all* to *a very great degree*. The positively framed items and restricted response options can create demand characteristics and inflate individuals’ reports of adversarial growth.

Indeed, research has demonstrated the methodological limitations with such questionnaires. Boals and Schuler (2018) adapted the items and response options of the *Stress-Related Growth Scale* (SRGS; Park et al., 1996) to frame items neutrally and allow individuals to report negative change, no change, or positive change on a scale from -3 to +3. For example, the item: “I learned to be open to new ideas and information” was adapted to “I experienced a change in the extent to which I am open to new information and ideas.” They compared the degree of self-reported adversarial growth on the adapted questionnaire (*Stress-Related Growth Scale-Revised*; SRGS-R), the original SRGS (Park et al., 1996), and PTGI (Tedeschi & Calhoun, 1996) and examined their associations with mental health and well-being outcomes. The results indicated that lower levels of adversarial growth were reported on the SRGS-R compared to the other questionnaires, and the SRGS-R showed a more adaptive pattern of associations with well-being outcomes. While all questionnaires were positively associated with positive affect, only the adapted SRGS-R was negatively

associated with maladaptive coping strategies. Boals and Schuler (2018) argued the adapted SRGS-R was less prone to positively biased and inflated self-reports of adversarial growth.

Boals and Schuler (2019) also found that compared to the SRGS-R, the PTGI resulted in higher reports of adversarial growth in response to an irritating, but not a traumatic event—a cracked phone screen. Boals and Liu (2020) replicated this finding after recalling the worst movie watched. Taken together, these findings show that questionnaires can encourage individuals to inflate their reports of adversarial growth, and these inflated self-reports are not necessarily indicative of well-being.

1.2 Using Narrative Methods to Assess Adversarial Growth

We draw on narrative identity research (McAdams & McLean, 2013) to examine whether the collection of personal narratives of distressing experiences broadens our understanding of adversarial growth beyond questionnaire-based methods. According to the narrative identity approach to the study of personality (McAdams, 1995), the narrative construction of key life experiences captures the meaning of the experience to the individual. For example, two individuals may receive a similar cancer diagnosis, and one person may see it as something to simply endure, whereas the other person may view it as a catalyst for a healthier lifestyle. Researchers have noted that the process of constructing and revising narratives about key experiences is integral to self-development (Adler, 2019; McLean et al., 2007), and may facilitate adversarial growth over time (Adler, 2012; Adler et al., 2015; Jayawickreme et al., 2021; Weststrate et al., 2022). That being said, longitudinal data assessing narrative growth have not been collected often enough and the findings available pertaining specifically to adversarial growth are somewhat inconclusive (Blackie & McLean, 2022).

The narrative identity approach has much to offer researchers interested in the development of adversarial growth over time, but of critical importance to this study, the use

of written narratives may also address some of the methodological challenges with questionnaires. First, narrative prompts might reduce the demand for participants to report adversarial growth if the prompt does not specifically ask about degree of (positive or negative) changes experienced because of the event. As a result, adversarial growth reported via narratives might have stronger associations with well-being when compared to closed-ended survey methods. Second, narratives allow individuals to tell their experiences in their own words, which is important from the perspective of scientific ethics and may also allow individuals to uniquely express adversarial growth in ways beyond the domains typically assessed in closed-ended surveys.

1.3 Current Study

We collected individuals' personal narratives about a highly challenging and stressful life experience along with responses to the PTGI-X (Tedeschi et al., 2017) and SRGS-R (Boals & Schuler, 2018) and mental health and well-being measures. In this pre-registered study, we examined three research questions:

1. What are the associations between questionnaire and narrative methods when assessing adversarial growth?
2. Do narrative methods predict mental health and well-being outcomes over and beyond questionnaire assessments?
3. What new themes of adversarial growth are expressed in individuals' narratives of challenging and stressful experiences?

For the first and second questions, we used an established narrative coding scheme to score adversarial growth in participants' narratives and examined the associations between questionnaire and narrative assessments of growth and mental health and well-being outcomes. We predicted that narrative adversarial growth would be positively correlated with the PTGI-X and SRGS-R, but it would be more strongly correlated with the SRGS-R because

these methodologies should reduce bias compared to the PTGI-X. We predicted narrative growth would be associated with unique variance in mental health and well-being, controlling for the SRGS-R. The third question was exploratory and aimed to determine if a broader scope of expression of adversarial growth was reported in narratives. The research questions and study hypotheses were pre-registered prior to data collection². Data files, measures, and scripts are available on OSF:

https://osf.io/rasb3/?view_only=498097d51c154e3589fc264cf5aeff3c

2. Method

2.1 Participants

After *a priori* data exclusions as explained in the results, our participants were 224 individuals from a medium-sized public college in the Pacific Northwest of the US and 186 participants recruited online from Prolific. The college sample had a mean age of 21.02 years ($SD = 4.23$), the majority of whom identified as women (67%), White or Caucasian (66%), and heterosexual in their sexual identity (56%). The remaining sample identified their gender as men (22%), gender queer (1%), provided an open-text response (2%), or did not answer (7%). When asked to indicate their racial or ethnic background, the remaining sample identified as Latino, Latinx, or Hispanic (9%), Asian, Asian American, or Pacific Islander (8%), Black or African American (2%), Native American or American Indian (1%), provided an open-text response (2%), or did not answer (12%). For sexual identity, the remaining sample identified as bisexual (25%), pansexual (5%), lesbian (3%), gay (3%), queer (3%), asexual (2%), or provided an open-text response (2%). The Prolific sample had a mean age of 35.51 years ($SD = 11.28$), and 50% identified as women, 48% as men, 1% as gender queer or non-binary, and 1% did not answer. Most of the sample identified as white (59%) and

² We explain any deviations from our pre-registration in footnotes throughout the methods and results section.

heterosexual (81%). When asked about their racial or ethnic background, the remaining sample identified as Black or African American (14%), Asian, Asian American, or Pacific Islander (14%), Latino, Latinx, or Hispanic (8%), provided an open-text response (3%), or did not answer (2%). For sexual identity, the remaining sample identified as bisexual (9%), lesbian (2%), gay (2%), pansexual (2%), queer (1%), asexual (1%), or provided an open text response (2%).

The required sample size for both samples was calculated with an *a priori* power analysis as reported in the pre-registration. Participants were recruited, either through an electronic subject pool for course credit, or via Prolific for payment, for an online survey examining how people experience difficult and challenging life events. To ensure comparability of samples, only US participants were recruited through Prolific. Both samples completed an online survey at a time and location of their own choosing. Throughout our analyses, we examined the college and community independently, as we were interested in the potential for replication across two distinct samples.

2.2 Materials and Procedure

The study utilized a cross-sectional and correlational design where participants recalled a challenging event from their lifetime and answered questionnaires about adversarial growth. Both samples completed the questionnaires in the same order. The data were collected between January and May 2021.

After providing informed consent, participants answered the following questionnaires about their mental health and well-being in a randomised order: 20-item *Positive and Negative Affect Schedule* (Watson et al., 1988), *Short General Health Questionnaire* (GHQ-12; Goldberg & Blackwell, 1970), 18-item *Psychological Well-Being Scale* (Ryff & Keyes, 1995), *Depression Anxiety and Stress Scale* (DASS-21; Lovibond & Lovibond, 1995). These scales were selected to mirror those used by Boals and Schuler (2018) who compared the

strength of associations between the PTGI, SRGS-R, and mental health to determine if their SRGS-R demonstrated more adaptive patterns of associations. Their choice to use these specific mental health measures was based on selecting the same measures from a well-regarded meta-analysis on the relationship between adversarial growth and mental health (Helgeson et al., 2006) to aid comparison between the SRGS-R and existing research on the PTGI and mental health.

Next, participants were asked to provide a written narrative about a specific life event that was “highly challenging and stressful, involved a significant amount of adversity, and that challenged you in some fundamental way.” The prompt was designed to elicit difficult events that would be relevant to adversarial growth, but to avoid priming thoughts about positive or negative changes directly. Afterwards, participants answered questions about how old they were when the event happened, how long ago it occurred in months and years, how much they think about this event, whether they received professional support, if they had told anyone about the event, and if so, how many people.

Finally, participants answered the following two adversarial growth questionnaires, which were presented in a randomised order: *Post-Traumatic Growth Inventory Expanded* (PTGI-X; Tedeschi et al., 2017) and *Stress-Related Growth Scale-Revised* (Boals & Schuler, 2018). Participants provided demographic information at the end of the survey, including age, gender identity, sexual orientation, and racial or ethnic identity before being debriefed on the purpose of the study.

2.3 Data Preparation

Before undertaking our planned analyses, we reviewed data quality. We first reviewed the questionnaire data and excluded participants who had answered zero questionnaires after providing their consent. The level of missing questionnaire data after non-responders were removed for the variables used in our preregistered analyses was minimal. For the college

sample only 4% had any item-level missing data at all and for the majority it was only 1-item missing in the survey. For the Prolific sample, 18% of the sample had missing items, but 17% of these participants only had 1 or 2 items missing. Next, the first and second authors examined all the narratives in both samples to ensure participants had followed instructions. We excluded participants if they had not provided a narrative at all, or if their narrative did not follow instructions. Specifically, we excluded participants who had only provided a simple event description (e.g., “lost mother”), and participants who had provided a description of a whole life period, rather than a single specific adverse and challenging event that had occurred. These procedures resulted in the exclusion of 39 participants and our final samples were 187 participants from Prolific³ and 224 participants from college.

2.4 Narrative Coding

We approached narrative coding in two ways. First, we conducted quantitative coding of narrative growth to answer our first two research questions. Using established coding schemes (Pals, 2006; Weststrate & Glück, 2017), each narrative was scored on a 4-point scale from *no evidence of growth* (score of 0) to *strong themes of growth* (score of 3). The coders were instructed that growth was a positive change that occurred because of a life event. It was specified that the type of positive change could be unique to individual, but it would be viewed by them as something that enhances their life or promotes self-development in some way. It was further specified that the narrator might attribute the growth to the event itself, what happened because of the event, or what they took from the event when reflecting on the event from their present viewpoint. When evaluating and providing a score for the narrative from 0 to 3, the coders were asked to consider how elaborate and complex the growth was and how important and transformative it was. With higher narrative growth scores assigned

³ We note that after the exclusions the Prolific sample was four participants (2%) smaller than the sample size of 191 participants estimated from our power analyses.

when the positive change was highly elaborated through rich description and the narrator clearly articulated the importance and transformative impact of this change on them. This approach is contrasted to the PTGI-X (Tedeschi et al., 2017) and SRGS-R (Boals & Schuler, 2018) described in section 2.2, because a pre-defined list of possible changes is given in these questionnaires, and individuals indicate the extent to which the changes have occurred in their lives. The narrative coding instructions along with prototypical examples of elaborated and less elaborated narratives that were given to coders to train them on the scheme is available to view via our OSF page. All narratives were scored by a master coder and a reliability coder scored 20% of the data (Syed & Nelson, 2015). High levels of inter-rater reliability for coding growth were established ($ICC = .87$)

Second, we conducted exploratory qualitative coding to answer our third question about novel adversarial growth themes. The first author, with expertise in adversarial growth, undertook content analysis to explore whether the narratives had similar expressions of adversarial growth compared to the pre-defined domains in closed surveys⁴. Content analysis was used to generate broad descriptions of the main concepts (referred to as categories) represented in a data set (Elo & Kyngäs, 2008). We adopted a deductive approach to coding where our analysis was guided by an existing theoretical framework for posttraumatic growth. Specifically, the first author created a categorisation matrix with five broad categories—personal strength, appreciation of life, spiritual-existential change, relating to others, and new possibilities—from the dimensions assessed in the PTGI-X survey (Tedeschi et al., 2017). Categories were not created from the SRGS (Park et al., 1996) given its unidimensional structure. However, we note similarities between our final categories and the SRGS in our discussion of results.

⁴ We changed from framework analysis as outlined in our pre-registration to content analysis.

Each narrative was the unit of analysis (Elo & Kyngäs, 2008) and was read multiple times. The first author coded each unique idea in a narrative that was judged to be relevant to the 5 categories in the coding matrix. The codes were intended to capture what participants said without reading into the meaning behind their words. As our interest was in exploring whether participants expressed novel forms of adversarial growth in their narratives, the coder identified any relevant ideas that were not captured by the matrix categories and temporarily placed these codes in a miscellaneous category. After all the narratives were coded, the codes were reviewed within each category separately to judge their internal coherence and representativeness of the category. If a code was judged to be more representative of another category it was moved to that category during this stage of the analysis. Afterwards, codes were reviewed in the miscellaneous category. On reflection, some were placed under existing categories, whereas other codes were grouped into new categories when there were multiple codes expressing a broader idea that was not already represented in the matrix.

3. Results

3.1 Associations Among Measures of Adversarial Growth

We first calculated descriptive statistics including means, standard deviations, and the frequency (%) of participants who had reported some degree of adversarial growth via each of the methods (Table 1). For the PTGI-X measure this was the percentage of participants in each sample who had a mean score of ≥ 1 because means lower than this shows participants had answered questions with '0' to indicate they had not experienced adversarial growth. For the SRGS-R measure this was the percentage of participants in each sample who had a mean score ranging between 1 and 3 because this mean range indicates some through to high levels of adversarial growth were reported (whereas scores between -1 and -3 indicate negative changes and means of 0 indicate no changes were reported). For the narrative growth

measure this was the percentage of participants in each sample whose narrative had a score of 1, 2, or 3 because this indicated coders had detected some through to strong themes of growth in the narratives. As seen in Table 1, in both samples, participants were more likely to report adversarial growth on the PTGI-X compared to the SRGS-R and narrative methods.

We ran Spearman's correlations to examine associations between narrative growth, PTGI-X, and SRGS-R (because at least one of these variables was significantly skewed in both samples). Narrative growth was positively correlated with PTGI-X and SRGS-R in both samples (Table 2), indicating that higher narrative growth was associated with higher endorsement of adversarial growth on the questionnaires. Additionally, scores on the PTGI-X and SRGS-R were positively correlated in each sample. We compared the magnitude of the correlation between narrative growth and SRGS-R to that of the correlation between narrative growth and PTGI-X in each sample with a Fisher's *r*-to-*z* transformation adjusted for Spearman's correlations. The two correlations did not differ significantly in magnitude in the college sample, $z = 1.255$, ($SE = .098$), $p = .210$, or in the Prolific sample, $z = 1.066$, ($SE = .107$), $p = .286$.

3.2 Incremental Validity of Narrative Growth

We conducted a principal component analysis to reduce our mental health and well-being measures into smaller and more meaningful outcomes for analysis. We entered DASS anxiety, DASS depression, GHQ12, PANAS positivity, PANAS negativity, and overall PWBS⁵ scores into a principal component analysis with a Promax rotation. The Kaiser-Meyer-Olkin measure was greater than .7 in both samples verifying the sampling adequacy for analysis. Two factors had eigen values greater than 1 and explained 75.19% of the variance in the college sample and 77.62% in the Prolific sample. Examination of these two

⁵ We deviated from our pre-registration and used the overall scale score from the PWBS because it is not recommended to create sub-scores with the short form of this scale.

components after rotation in each sample indicated that DASS anxiety, DASS depression and PANAS negativity scores loaded onto one factor (loading .7 or greater) and PANAS positivity, PWBS and GHQ12 scores loaded onto another factor (loading .7 or greater). We standardized all scale scores and created two outcomes called well-being and negative affect, respectively. We examined correlations between narrative growth and word count in each sample to determine if this needed to be controlled for in our analyses. The correlation between narrative growth and word count was positive and significant for both the college sample $r(224) = .233, p < .001$ and Prolific sample $r(187) = .230, p = .002$. We therefore controlled for word count in our subsequent analyses.

We examined the relationship between narrative growth and well-being controlling for SRGS-R and word count. We ensured data met the assumptions required for regression. Proceeding with the main analyses, we entered SRGS-R and word count in the first step, and narrative growth in the second step, requesting R^2 change statistics. For the college sample, SRGS-R and word count predicted a significant proportion of the variance in well-being in the first step ($R^2 = 6.5\%$, $F(2,221) = 7.660, p < .001$). However, the inclusion of narrative growth in step 2 did not account for a significant increase in the variance explained (R^2 change = .08%, $F(1,220) = 1.911, p = .168$). Only SRGS-R was a significant predictor of well-being in both steps for the college sample, indicating that higher endorsement of adversarial growth on the SRGS-R was associated with greater well-being (Table 3). The same findings were observed with participants in the Prolific sample. SRGS-R and word count predicted a significant proportion of the variance in well-being in the first step ($R^2 = 24.2\%$, $F(2,183) = 29.260, p < .001$) and the inclusion of narrative growth in step 2 did not account for a significant increase in the variance explained (R^2 change = .00%, $F(1,182) = .023, p = .880$). Again, only SRGS-R was a significant predictor of well-being in both steps of the analyses (Table 3).

Next, we examined the relationship between narrative growth and negative affect when controlling for SRGS-R and word count. We confirmed that the data met assumptions required for regression. We entered SRGS-R and word count in the first step, and narrative growth in the second step, requesting R^2 change statistics. For the college sample, SRGS-R and word count did not predict a significant proportion of the variance in negative affect in the first step ($R^2 = .09\%$, $F(2,221) = .958$, $p = .385$) and the R^2 change statistics were also not significant indicating that the inclusion of narrative growth in the second step did not account for significantly more variance than the outcomes in the first step (R^2 change = $.07\%$, $F(1,220) = 1.659$, $p = .199$). None of the variables in the model were significant predictors of negative affect in either step of the analyses (Table 4). In contrast, in the Prolific sample, SRGS-R and word count did predict a significant proportion of the variance in negative affect in the first step ($R^2 = 8.92$, $F(2,183) = 8.128$, $p < .001$) but the inclusion of narrative growth did not account for a significant increase in the variance explained (R^2 change = $.09\%$, $F(1,182) = 1.841$, $p = .177$). Only SRGS-R was a significant predictor of negative affect in both steps of the analyses (Table 4), indicating that greater endorsement of adversarial growth on this questionnaire was associated with lower reports of negative affect.

Considering these results, we conducted two further regression analyses where, for each sample separately, we regressed narrative growth onto well-being in the first step and SRGS-R and word count in the second step to see the direct relationship between narrative growth and well-being before controlling for the influence of SRGS-R and word count. We conducted this exploratory analysis (not part of our pre-registration) only for the well-being outcome because the results were consistent in both samples for well-being, but not for negative affect. In both samples, narrative growth was a significant predictor of well-being in step 1 ($b = .153$, $p = .031$, Prolific sample; $b = .144$, $p = .003$, college sample), but SRGS-R was the only significant predictor in step 2 ($b = .407$, $p < .001$, Prolific sample; $b = .146$, $p =$

.005, college sample) and the step 2 variables accounted for a significant increase in the variance explained ($R^2 = .217$, $F(2,182)$, = 26.122, $p < .001$, Prolific sample; $R^2 = .034$, $F(2,220)$, = 4.088, $p = .018$, college sample).

3.3 Categories of Narrative Growth

Figure 1 shows the final categories from the qualitative analysis. Table 5 reports all the sub-categories and codes within each category along with narrative excerpts. Of the five pre-defined growth categories that are assessed on questionnaires, four were identified in the narratives. Interestingly, the growth domain of spiritual-existential change was not expressed by participants; however, we found evidence for personal strength, new possibilities, relating to others, and appreciation of life. The expression of these four domains of adversarial growth was largely the same as the content assessed through questionnaire items, with a few notable exceptions.

Personal strength was characterised by feelings of self-reliance, a greater ability to handle challenges, and improved emotional regulation after stressful situations. The one unique code in the personal strength domain from the narratives that is not assessed with questionnaires was participants' desire to confront fears and push outside their comfort zone. New possibilities were characterised by pursuing new directions in life, often through changes in career and education choices that offered new skills and opportunities. Relating to others was also found in the narratives, and it was a rich and elaborate category, which we further divided into three sub-categories of: (i) closeness to others, (ii) greater investment in others, and (iii) developing and sustaining healthy relationships. The first and second sub-categories expressed ideas that are well represented at the item-level within questionnaires of adversarial growth. The final sub-category expressed novel ideas and involved a range of different behaviours for sustaining healthy relationships including setting boundaries, being less self-centred, apologising for harm caused, being honest, and walking away from toxic

relationships (see Table 5). Finally, appreciation of life was present in the narratives, and a rich and elaborate category that we further divided into two sub-categories of: (i) cherishing and enjoying life and (ii) commitment to meaningful pursuits, which are both well represented at the item-level of existing questionnaires of adversarial growth.

However, through the qualitative content coding of narratives we identified two new categories that captured novel expressions of adversarial growth, which are not assessed in existing questionnaires. The new categories were *acceptance* and *self-prioritisation*. The category of acceptance was characterised by accepting what you cannot change in life and adapting yourself to suit your new circumstances (see Table 5). This was coded as adversarial growth in the narratives because it was discussed by participants as a transformation in their thinking patterns and had changed how they now approached and handled challenging life situations. Finally, the category of self-prioritisation was unique and a very rich, diverse, and elaborated category in our data, which we divided into four sub-categories: *striving for self-improvement*, *internal locus of self-worth*, *agency and self-direction*, and *importance of self-care*. For the sake of brevity, we will only highlight the main ideas that characterise each of the sub-categories and refer the reader to Table 5 for a comprehensive review of all the codes. *Striving for self-improvement* was characterised by changing behaviours, including unhealthy habits and opinions on the self, and aspiring to achieve one's potential. *Internal locus of self-worth* was characterised by accepting oneself and not anchoring self-worth to others' approval or one's performance. *Agency and self-direction* was characterised by advocating for one's needs and staying true to values and avoiding being swayed by others. *Importance of self-care* was characterised by making health a personal priority and walking away from things that negatively impact mental or physical health.

4. Discussion

The notion of adversarial growth – that people learn, change, and develop in positive ways in their selves, worldviews, and relationships after adversity – is a major focus of contemporary scientific scrutiny (Blackie & Jayawickreme, 2022). Research has consistently found that the positive framing of items and restricted response options in questionnaire-based methods can result in inflated self-reports of adversarial growth that are not necessarily associated with adaptive outcomes (Boals & Liu, 2020; Boals & Schuler, 2018, 2019). We explored how the collection and coding of individuals' narratives about distressing events may broaden researchers' understanding of adversarial growth. We used both qualitative and quantitative methodologies to compare individuals' expressions of adversarial growth when collected via narratives and questionnaires and examined the extent to which narrative growth predicted variance in mental health and well-being outcomes. We expected to observe some unique expressions of adversarial growth when individuals described their experiences in their own words, for narrative growth to be most strongly associated with adapted questionnaire assessments that reduce self-report bias, and for narrative growth to predict unique variance in well-being after controlling for questionnaire methods. However, we found mixed support for these hypotheses, with the results offering a complicated picture of when it is advantageous for researchers to use narratives to measure adversarial growth instead of questionnaires.

Our qualitative analysis of the narratives supported our hypothesis that there would be unique expressions of adversarial growth. Although we found that the major dimensions of adversarial growth assessed in questionnaires were organically narrated by individuals in narratives, we also found unique expressions of growth that are not well captured by existing questionnaires. For example, while the broader dimension of relating to others was found, there was a unique focus on sustaining healthy personal relationships in the narratives. When

given the opportunity, participants narrated how challenging experiences had taught them the importance of cultivating respectful and nurturing relationships, and this involved setting boundaries and walking away from toxic relationships. Critically, participants recognised their role in cultivating these healthy dynamics and committed to honest communication, being less self-centred, and taking responsibility for correcting their own destructive behaviours. This expression of adversarial growth differs from the content assessed in the PTGI-X or SRGS-R questionnaires.

We further identified two new categories from our qualitative analyses – acceptance and self-prioritisation. The category of acceptance involved ideas relating to the relinquishing of illusions of personal control. The category of self-prioritisation was a central and well-developed idea in our narratives, in which individuals discussed the importance of agency, self-motivation, and recognising their worth. While some of these ideas are captured by a few individual items in the SRGS-R – changes to confidence, agency, and dependency on others – this theme was far more elaborate and expansive in the narratives. Specifically, not only were the notions of agency, confidence, and value of internal locus of control more diverse and comprehensive than the few items in the SRGS-R, there were two sub-categories – striving for self-improvement and importance of self-care – that are not present in the SRGS-R at all. In these sub-categories, individuals narrated how difficult experiences had taught them the value of challenging ingrained perceptions of themselves, working on character flaws, and prioritising their health and well-being. In sum, these expressions of adversarial growth are not captured by the existing closed survey questionnaires.

As expected, we did find narrative growth was positively associated with adversarial growth assessed via both the PTGI-X and SRGS-R questionnaires, demonstrating convergent validity for the narrative method. Yet, narrative growth was not more strongly associated with adapted questionnaires that reduce demand characteristics (i.e., SRGS-R) where items

are neutrally worded, and where individuals can report negative, positive, or no change for each item. We observed that adversarial growth was comparably low and similar in frequency when it was assessed with narratives or via the SRGS-R in both samples. Similar to Boals and Schuler (2018), we found that reports of adversarial growth were highest via the PTGI-X questionnaire in both samples. Taken all together, our results suggests that both narratives and the SRGS-R may reduce individuals' tendency to accentuate their reports of adversarial growth when positively framed items and response scales are removed from assessment methods.

Importantly, our results demonstrated that adversarial growth was still observed in the narratives (and to similar degrees as via the SRGS-R) even when the narrative prompt did not explicitly ask individuals to speak to how the event had changed them. This finding is consistent with research that shows individuals in the USA tend to narrate their own challenging experiences, and prefer stories from others, which conform to the master narrative of redemption (McLean et al., 2020; McAdams, 2013). The strong preference for redemptive stories is not necessarily shared in some European countries (Blackie et al., 2020; Eriksson et al., 2020), therefore future research is needed in different cultural contexts. We also acknowledge that the generalizability of our findings with regards to the representation of the redemption narrative might also be restricted by the demographics of our two samples, which were predominantly female (college sample) and white (college and community samples).

We did not find narrative adversarial growth to predict additional unique variance in well-being when controlling for the SRGS-R. Further analyses found that narrative growth predicted well-being, but there was no evidence of incremental validity, and narrative growth no longer predicted outcomes when SRGS-R was included in the model. This result was unexpected given that past research has consistently found narrative constructs to predict

incremental validity in well-being, relative to questionnaire-based assessment (Adler et al., 2016). However, narrative studies have tended to control for different variables, such as personality traits, rather than two self-report measures that are designed to capture the same construct. Our study therefore adopted a conservative approach by controlling for the SRGS-R to determine the added value of the narrative method for assessment of adversarial growth. There are at least two methodological factors that might have influenced this result. First, the stronger association between the SRGS-R and well-being outcome measures could be explained in part by common method bias. Compared to the narrative growth variable, the correlation between SRGS-R and well-being outcomes was likely inflated due to shared method variance. Second, by controlling for word count we could have unintentionally eliminated variance in narrative growth that might have been meaningfully related to well-being outcomes. While controlling for word count may be a way to control for dispositional verbosity, describing growth may simply require greater elaboration.

Null results notwithstanding, there are important reasons narrative assessments could improve the scientific study of adversarial growth. First, it is important to note that, in contrast to questionnaire methods, narrative methods prioritize participants' constructions of their own experiences (Adler et al., 2016). Doing so offers an important ethical perspective in research on challenging life events, one centered in narrative methods that invite participants to share their stories, rather than just respond to questionnaire items. Furthermore, as psychological research continues to embrace greater diversity in its samples, we are likely to see even more diversity in what people perceive to be adversarial growth, and the narrative method is particularly well suited to capture this (e.g., Booker et al., 2022), as was evidenced through our qualitative investigation of expressions of adversarial growth.

Second, narratives, compared to questionnaires, provide researchers with information on the most meaningful changes an individual has experienced. While questionnaires capture

the diversity and extent of different changes an individual has experienced and might provide individuals with opportunities to report on changes they might not have otherwise done so via an open-text narrative, questionnaires miss the reflective quality inherent in narratives. This narrative reflective quality is even more important for researchers when measuring the development of adversarial growth over time, given that this concept is viewed as enduring positive changes individuals deliberately make in their lives after deep and contemplative reflection about the impact and significance of their adversity (Tedeschi & Calhoun, 2004). Indeed, a parallel between the reflective process in narratives and the construct of personal growth initiative (PGI; Robitschek et al., 2012) can be drawn here, because PGI involves individuals identifying and setting self-improvement goals that they actively and intentionally pursue through planning and effective use of supporting resources.

Finally, while this cross-sectional study examined how narrative methods expand the study of adversarial growth through evaluating if personal narratives offered methodological advantages over questionnaires, we acknowledge that studying how adversarial growth unfolds requires longitudinal designs (Jayawickreme & Blackie, 2014). One question that arises for future enquiry regarding the use of personal narratives is whether the content of individuals' narrative identity changes after adversity (Weststrate et al., 2022). This approach does not rely on the collection of a single narrative about a specific event, as was collected in this study, but rather, it involves the collection of multiple narratives across time, and an examination of the extent to which themes that emerged from adversarial growth are present in other freely recalled important and self-defining memories across the life story (e.g., Adler, 2012; Josselson, 2009; Patterson et al., 2022). There are many open questions for investigation in this context, one being the timeline for when adversarial growth may manifest as narrative identity change. There is currently no empirical research addressing timeframe, but a recent theory paper on adversarial growth that outlined possibilities for

change across different levels of personality (i.e., traits, characteristic adaptations, and narrative identity; McAdams & Pals, 2006) proposed that narrative identity change might occur quicker than changes to personality traits or values, given the meaning making properties of narration, but it might not necessarily be a stable change, as the life story changes and evolves with new experiences. These intriguing and important questions await future empirical investigation.

In conclusion, our results paint a complicated picture. On the one hand, narratives enabled individuals to share experiences of adversarial growth that would otherwise not be measured with existing questionnaires. On the other hand, the adapted SRGS-R predicted well-being and negative affect over and beyond narratives. Both narratives and the SRGS-R reduced a tendency for individuals to over-report adversarial growth that is problematic in other widely used questionnaires, such as the PTGI (Tedeschi & Calhoun, 1996). Thus, the SRGS-R offers researchers a time- and cost-effective questionnaire method for collecting data on adversarial growth, but narratives might still be preferable in some situations where researchers suspect they will find novel expressions of adversarial growth, desire inductive flexibility in their methodological approach, intend to study the self-reflective processes that may facilitate identification of positive changes, or aim to amplify participants' voices in the understanding of adversarial growth.

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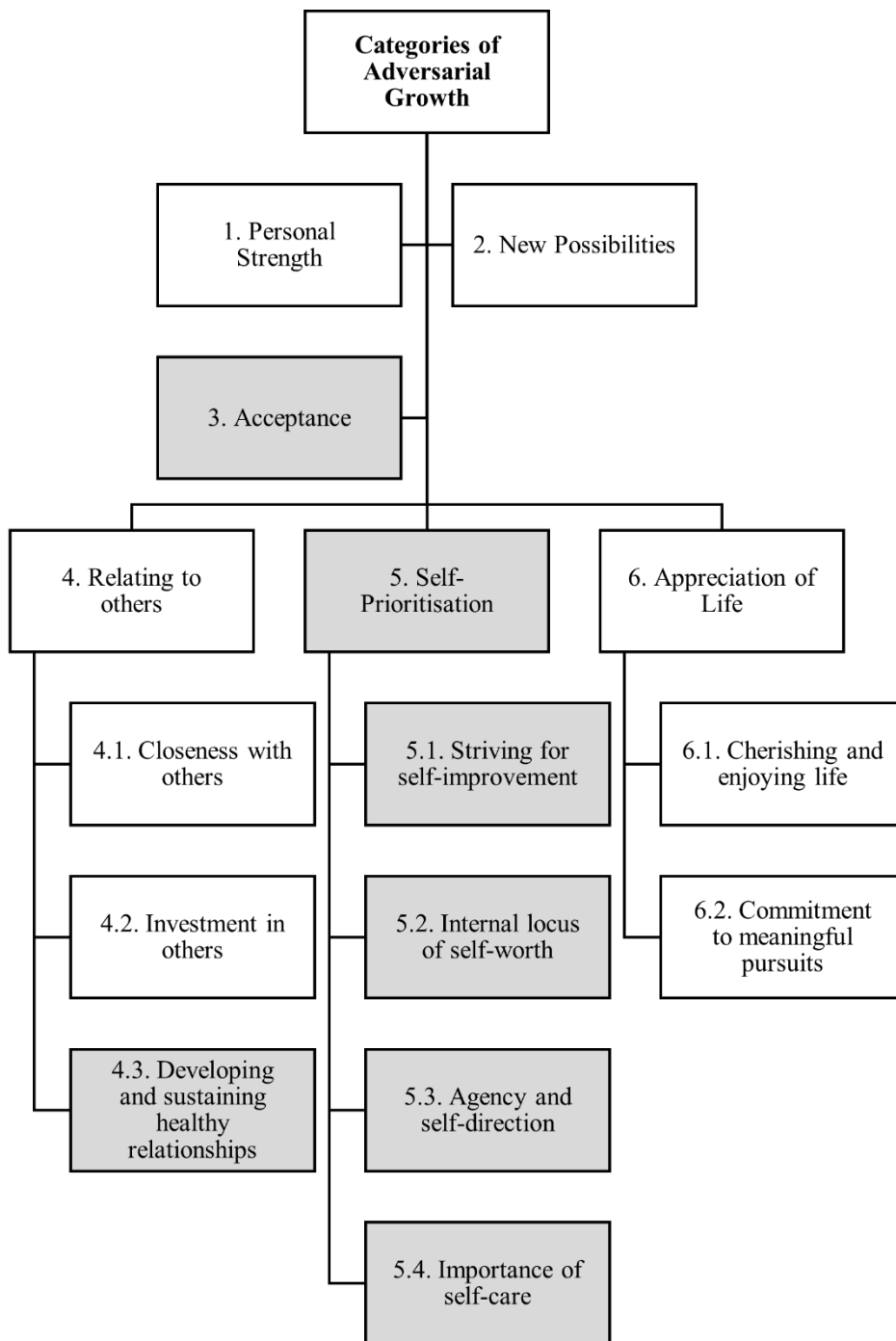
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Figure 1

Categories of Adversarial Growth from Coding of Narratives About Challenging Events



Note. Boxes shaded in grey represent new growth categories and sub-categories.

Table 1

Descriptive Statistics for Adversarial Growth Reported in Questionnaires and Narratives

Sample	Measure	Scale Range	Min	Max	<i>M</i> (<i>SD</i>)	Frequency in sample (%)
College	PTGI-X	0 to 5	0	4.96	2.22 (1.24)	82.1
	SRGS-R	-3 to 3	-2.47	3	1.00 (1.03)	45.5
	Narrative	0 to 3	0	3	0.81 (1.01)	48.2
Prolific	PTGI-X	0 to 5	0	5	2.48 (1.35)	82.9
	SRGS-R	-3 to 3	-2.53	3	0.85 (1.02)	42.8
	Narrative	0 to 3	0	3	0.57 (.88)	36.4

Note. SRGS-R is the Stress-Related Growth Scale-Revised (Boals & Schular, 2018) and PTGI-X is the Posttraumatic Growth Inventory-X (Tedeschi et al., 2017).

Table 2

Correlations Between Adversarial Growth Assessed from Questionnaires and Narratives

	1	2	3
1. Narrative Growth	-	.400** [.280, .507]	.292** [.163, .410]
2. SRGS-R	.322** [.182, .449]	-	.689** [.611, .754]
3. PTGI-X	.216** [.071, .353]	.783** [.718, .835]	-

Note. Correlations for the college sample ($n = 224$) are presented above the diagonal and the Prolific sample ($n = 187$) below the diagonal. Values in parentheses reflect 95% confidence intervals.

* $p < .05$. ** $p < .01$

Table 3*Hierarchical Regression Predicting Well-Being*

Sample	Step	Effect	<i>B</i>	<i>SE</i>	β	<i>p</i>
College	1	Intercept	-.311	.095	-	.001
		SRGS-R	.176	.047	.245	< .001
		Word count	.000	.000	.069	.290
	2	Intercept	-.317	.094	-	< .001
		SRGS-R	.146	.052	.203	.005
		Word count	.000	.000	.045	.500
		Narrative growth	.075	.054	.102	.168
Prolific	1	Intercept	-.401	.100	-	.001
		SRGS-R	.409	.054	.489	< .001
		Word count	.000	.000	.048	.455
	2	Intercept	-.402	.101	-	< .001
		SRGS-R	.407	.056	.486	< .001
		Word count	.000	.000	.046	.491
		Narrative growth	.010	.067	.010	.880

Table 4*Hierarchical Regression Predicting Negative Affect*

Sample	Step	Effect	<i>B</i>	<i>SE</i>	β	<i>p</i>
College	1	Intercept	.387	.110	-	<.001
		SRGS-R	-.044	.054	-.055	.415
		Word count	.000	.000	-.075	.265
	2	Intercept	.394	.110	-	<.001
		SRGS-R	-.012	.060	-.014	.845
		Word count	.000	.000	-.052	.452
Narrative growth		-.081	.063	-.098	.199	
Prolific	1	Intercept	.223	.110	--	.044
		SRGS-R	-.236	.059	-.284	<.001
		Word count	.000	.000	-.020	.779
	2	Intercept	.233	.110	-	.035
		SRGS-R	-.213	.061	-.256	<.001
		Word count	.000	.000	.003	.967
		Narrative growth	-.099	.073	-.103	.177

Table 5*Categories of Adversarial Growth from Qualitative Content Coding of Narrative Data*

Category	Sub-Category	Code	Narrative Excerpts
1. Relating to others	1.1. Closeness to others	a. Being more appreciative of others	“Yet, this incident stands out not only because of its recency, but because my wife and daughter empowered me to keep moving forward. Without them, I am not sure what I would have done. I appreciate my family now more than ever.” “I have not had time to process it fully, and am currently still in the enthrals of finding out what it means to me today. Life is very busy at the moment. I have realized one thing that I love my family and our bond has only strengthened through this short time.”
		b. Greater willingness to accept support and help from others	
c. Greater closeness with loved ones			
d. Spending more time with loved ones			
	1.2. Greater investment in others	a. Greater loyalty and commitment to loved ones	“I am there for my friends no matter what, because I know what it’s like to have nobody. Especially during that time, it can feel like your world is ending.” “This event changed me forever and who I am...Now I am [age] and enrolled in my 3rd year in college and just got accepted into the [degree program] at [university] and would love to get into helping others in team sports and eventually an Elementary PE teacher so I can be a role model for kids that need it.”
		b. Greater commitment to be supportive of others in their times of distress	
c. Greater desire to make sure others do not suffer similarly			
d. Desire to be a role model for others			
e. Becoming an ally or advocate for others in same situation			
f. Greater empathy and compassion towards others			
	1.3. Developing and sustaining healthy relationships	a. Confronting and fixing the destructive parts of oneself that one takes into relationships	“After much effort, confusion and difficulty it had allowed me to grow not only as a partner but as a person. As I had realized I was bringing trauma to the table I was never even aware of and have fixed things I should have already been doing. It may not have been the greatest route to the destination but I do not regret one bit at all.” “I learned how to see my own worth and although I will do everything I can to make something work for someone, I will not put myself in a situation where I will lose my light.”
		b. Developing new relationships that reflect where one is in life	
c. Walking away from toxic and harmful relationships			
d. Setting boundaries and no longer feeling one has to please everyone			
e. Being less self-centred and taking time to be present with others			
f. Acknowledging of wrongdoing and apologising for harm caused			
g. Learning to trust and be vulnerable with others			
h. Greater recognition of importance of honest communication			
2. Self-prioritisation	2.1. Striving for self-improvement	a. Working to improve character flaws	“I had to go through all the programs to get my license back and at the end of the day it made me a stronger person, because I got to recognize all the flaws that slowly started to build up over time.” “I am currently in treatment and still struggle every day with obsession over food and health. Today, I am very determined to change my viewpoint of myself and my health and make myself stronger and healthier than I have ever been.”
		b. Aspiring to reach one’s potential	
c. Recognising and challenging one’s personal limitations			
d. Greater motivation to change unhealthy habits			
e. Challenging ingrained self-perceptions			

2.2. Internal locus of self-worth	<ul style="list-style-type: none"> a. Recognition that self-worth is not tied to others' opinions b. Recognition that value and enjoyment are not dependent on one's performance c. Learning to accept and love oneself as one is d. Increased feelings of confidence e. Learning not to undermine oneself with doubts 	<p>"Everyone looked shocked each time I said that I wasn't part of the team, but the coach looked angry and shocked. I felt relieved that I had no ties to him. This event was significant to me because it made me realize that my worth wasn't determined by the opinions of others."</p> <p>"That event made me accept myself as not really good at wrestling but I still went to every practice anyways. After all, I had nothing really left to lose. I never became great at wrestling but at the end of the season I was comfortable with how I was."</p>	
2.3. Agency and self-direction	<ul style="list-style-type: none"> a. Greater desire to live life on own terms b. Not feeling pressured to do something that is not right for you c. Staying true to one's values even when it has a cost d. Advocating for and communicating one's values and needs 	<p>"I've come to the point of realization in my life that my existence as a human being always will anger someone, regardless of where I live or who I surround myself with. So now I make the active decision to do what I want and lead the life that I do now because only I can make myself happy and make things happen in my life that bring me purpose and joy."</p> <p>"Looking back, this was an important lesson for me. I am proud that I chose to follow my heart and do what I wanted to do. I am ashamed that I did not have the confidence to quit in person and deal with the repercussions of my decision. In retrospect, it was a big turning point in my life and one I'm glad happened."</p>	
2.4. Importance of self-care	<ul style="list-style-type: none"> a. Taking responsibility for one's own health and well-being b. Disengaging from activities that come at a cost to one's health c. Making one's health and well-being a priority 	<p>"It is something that took so much to fully wrap my head around and to fully label it for what it was. It has caused me to be much more cautious around people and led to a lot of mental health problems. However, I also believe it has made me a much more strong, badass woman and created a domino effect in my life that has led me to now being sober and putting my health and wellbeing first."</p> <p>"Within the timeline of two months I had to quit my job because it was too stressful/harmful on my mental health and body. After looking back on what it was like, I reflected on my actions and the tolerance I had. I felt sad that I didn't have enough will power to push through the job but happy I knew when it was too much before becoming burnt out."</p>	
3. Appreciation of life	3.1. Cherishing and enjoying life	<ul style="list-style-type: none"> a. Cherish the present and make memories to look back on b. Feeling lucky to be alive c. Make the most of life, and do not fear death d. Understanding life is precious e. Enjoy life and the pleasures it offers f. Do not take privileges for granted g. Recognition that life is fragile and not permanent h. Increased gratitude 	<p>"Today, just as after I lost my blood brother, I cherish good moments with people. I try to take photos to capture the memories as you never know when it will be the last."</p> <p>"It helped teach me about the impermanence and the brevity and fragility of life. It helped me make the most of my every day and my relationships with others as well."</p>
3.2. Commitment to	a. Evaluating what is important in life and working towards it	<p>"I made a bucket list... I rather do all the fun stuff now that I am healthy and young"</p>	

<p>meaningful pursuits</p>	<ul style="list-style-type: none"> b. Do the bucket list of activities while young, healthy and able c. Make the most of each day d. Commit to working towards personal aspirations and dreams 	<p>then wait until I am old and stressed out at life's end-users." (W33)</p> <p>I got up and ran to my department head's office and asked to see why I failed. She told me she didn't see enough growth and was disappointed in the work I submitted throughout the semester. This really made me evaluate what I wanted for myself as a whole and how to go about achieving it now that I was getting left behind."</p>
<p>4. Personal strength</p>	<ul style="list-style-type: none"> a. Greater self-perseverance in face of challenges b. Greater self-reliance c. Greater feelings of personal strength d. Feeling able to handle future challenges e. Greater ability to manage one's emotions and reactions to stressful situations f. Confronting personal fears to do something out of one's comfort zone 	<p>"It has been a challenge in that I've had to learn how to manage these events and all that they entail without becoming overwhelmed and frozen from the anxiety it produces."</p> <p>"[x] years ago I was diagnosed with cancer, [x] months into treatment I found out that my husband was having an affair. I was 100 pounds and bald and filed for divorce. Everyone thought I was nuts and I lost everything but I am a stronger person for it."</p>
<p>5. New possibilities</p>	<ul style="list-style-type: none"> a. Starting new professional ventures b. Leaving a path to pursue alternate options c. Pursuing new skills and opportunities 	<p>"I look at getting laid off at the time in my life as a turning point. I was able to get a little bit of consulting work pretty quickly, which I then turned into a one man consulting outfit, and then into a small consulting firm. The situation challenged me in a bunch of different ways, but ended up being the best thing that happened to me professionally."</p> <p>"I felt like an alien among them and they were all speaking a language I didn't understand. Worse, I didn't care to learn. I sat there staring at the clock on the wall and as soon as the bell rang I was out of my seat and into the hallway. I never looked back, not once."</p>
<p>6. Acceptance</p>	<ul style="list-style-type: none"> a. Accepting that you cannot change the past b. Accepting the reality of a situations c. Adapting one's lifestyle to suit new circumstances d. Accepting that not everything is under personal control e. Accepting there are no right or wrong ways to cope with adversity 	<p>"It was a feeling of being out of control because it was an act of nature and the only thing that decided whether our house survived was if the wind changed direction, which thankfully, it did. This event caused me to make sure I knew what was important in life and how come things are out of our control and that's just something we have to live with."</p> <p>"I borrowed friends computers and went to the dimly-lit computer lab over the course of my final exams, and passed them all with flying colors. I guess it's a lot easier to do what you can do once you accept what's happened has happened, and you can't change the past."</p>