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Does making meaning make it better? Narrative meaning-making and well-being in at-risk African-American adolescent females

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Abstract

It has been argued that, for certain people, attempts at making meaning about past life events, especially challenging events, might be detrimental to well-being. In this study we explored the association between narrative indicators of meaning-making and psychological well-being, while also considering the role of individual level factors such as life history, personality characteristics and locus of control, among an at-risk sample of low socioeconomic status inner-city African-American adolescent females with challenging lives. We found that having a more external locus of control and including more cognitive processing language in narratives about a highly negative past experience were associated with increased depressive symptoms. Our findings suggest that certain types of narrative meaning-making language may reflect ongoing and unsuccessful efforts after meaning, and, may be more similar to rumination than to resolution. Additionally, they support claims that for certain individuals from challenging backgrounds, efforts after meaning might not be psychologically healthy.

Highly negative or traumatic experiences are an unfortunate part of life, and individuals' ability to cope with these events is a critical contributor to overall psychological well-being. In particular, recent research has focused on individuals' abilities to create meaning from stressful events in the form of more coherent, emotionally expressive, and reflective narratives (Fivush & Baker-Ward, 2005; McLean, Pasupathi, & Pals, 2007). Overall results indicate that adults who construct more meaningful narratives of personal experiences show higher levels of well-being, but there remain critical questions about individual, developmental and gender differences in this process (see McLean & Pasupathi, 2010, for an overview). Perhaps most important, the vast majority of research has examined narrative meaning-making among populations where stressful and traumatic events are the exception in their daily life experiences. How might individuals create meaning about specific life events when embedded in challenging life histories, including experience with a multitude of negative and traumatic events, and how might this process of meaning-making relate to overall well-being, especially during adolescence, a key period for the development of adult identity and well-being? This is a critically important question because in a challenging life context it is possible that creating meaning is more difficult, and therefore efforts after meaning might be detrimental (McLean & Mansfield, 2011). Thus, the purpose of this study was to explore the association between narrative indicators of meaning-making and

psychological well-being among an at-risk sample of low socioeconomic status urban, inner-city African-American adolescent females with challenging lives.

Narratives are socially and culturally conventional mechanisms by which individuals organize and represent their past experiences (Bruner, 1987; McAdams, 1992). Autobiographical narratives are more than a simple account of what happened; they include explanations and emotional evaluations and through such narratives we create meaning from our personal past thereby facilitating self-understanding (Fivush, 2007; Fivush & Haden, 1997; McLean, Pasupathi, & Pals, 2007). Especially for negative and traumatic events, which often create a problem to be resolved, the ability to construct a coherent personal narrative that allows for the expression and regulation of thoughts and emotions may be a critical aspect of meaning-making, and ultimately well-being (Bartlett, 1932; Fivush & Baker-Ward, 2005; Pennebaker, 1997). Previous research has indicated at least three indicators of narrative meaning-making including: 1) coherence, such that narratives that follow and elaborate on a sequence of linked actions are more comprehensible; 2) inclusion of internal state language, especially cognitive processing words (e.g., “realize”, “understand”) and expressions of affect (e.g., emotions words and affective language such as “that was such a tough time in my life”), that indicate processing of the meaning of the event through a subjective perspective that provides interpretation and evaluation; and 3) reflective insight, that indicates the degree to which the narrative conveys how the event connects to the past and to the sense of self (see Fivush, Bohanek, Zaman & Grapin, in press, for a full discussion of forms of narrative meaning-making). In regards to well-being, individuals who are better able to express and explain their cognitive and emotional states through coherent and expressive narratives of negative and traumatic experiences are assumed to be engaged in the emotional regulation process which facilitates higher levels of well-being (Frattaroli, 2006).

Research on autobiographical narratives with adults has consistently indicated that narrative indicators of meaning-making are related to increased well-being. Coherence of the overall life narrative is related to a healthier and more generative identity (Baerger & McAdams, 1999), and coherent, reflective and emotionally expressive narratives about specific stressful life events are related to higher levels of well-being (Frattaroli, 2006; King, Scollon, Ramsey, & Williams, 2000; Pennebaker & Chung, 2007). Intriguingly, however, research with children and adolescents has shown more mixed results. Sales, Fivush, Parker, and Bahrack (2005) asked 3- to 4-year-old children to recall a devastating hurricane that destroyed their homes, a few months after the experience, and then again six years later when the children were 9 to 10 years old. Children who were most highly stressed initially recalled less information overall, and included less positive emotions and cognitive processing words in their recall than children experiencing less stress. Six years later, children who had initially recalled more positive emotion showed fewer post-traumatic stress symptoms than children recalling less positive emotion. These results suggest that the emotional and evaluative content of children’s narratives is positively related to their psychological well-being.

In contrast to these findings, Reynolds, Brewin, and Saxton (2000) found no relations between 8 and 12-year-old children’s use of cognitive processing and emotion words (positive and negative words combined together) in narratives of daily stressful events and their subsequent well-being. Because children and adolescents do not frequently include emotion words in their narratives (Bauer et al, 2005), Fivush and colleagues argued for an expanded conceptualization of emotion language that included expressions of general affect (e.g., “That was awful,” “That was hard for me,” “It was really cool.”) in addition to actual use of emotion words (e.g., “sad”, “scared”). Using a coding scheme developed from this conceptualization, they found that 8 to 12-year-olds who use more affective language

display lower levels of emotional well-being subsequent to narration (Fivush, Marin, Crawford, Brewin, & Reynolds, 2007; Marin, Bohanek, & Fivush, 2008; Murphy, Fivush, Sales, & Teague, 2009), suggesting that affective language may raise anxiety but, at this age, children and young adolescents may not yet have the skills needed to use narratives in the service of emotion regulation. However, by middle adolescence, Soliday, Garafolo and Rogers (2004) found that 14-year-olds seem to benefit psychologically from including internal state language in their narratives of stressful events. Thus adolescence may be a critical developmental period during which increasing narrative and emotion regulation skills are integrated in ways that allow for beneficial narrative meaning-making.

Indeed, adolescence is a key developmental period for many of the component skills of narrative meaning-making, especially in relation to developing identity and well-being (see Habermas & Bluck, 2000, and McLean & Pasupathi, 2010, for overviews). Erikson (1968) first identified adolescence as a period during which individuals strive to create an adult identity, and argued that narrative was a key process for developing a coherent sense of self through time. Increased social developments during adolescence allow for higher levels of self-reflection and perspective-taking (Harter, 1999), and increased cognitive skills allow for more temporally coherent and causally complex narratives (Fivush, Habermas, Zaman & Waters, in press; Habermas & Paha, 2001; Habermas & Bluck, 2000; Reese, Haden, Baker-Ward, Bauer, Fivush & Ornstein, in press). Examining the development of life narratives across adolescence, Habermas and his colleagues (Habermas & de Silveira, 2008; Habermas & Paha, 2001) found that global coherence of life narratives, defined as temporal order, causal links and autobiographical reasoning (explaining current events in terms of past events or person characteristics), increase across adolescence. In terms of relations between narratives and well-being, Reese, Yan, Jack and Hayne (2010) found that older, but not younger, adolescents who provided more organized life stories, defined as including more component chapters, showed higher levels of self-esteem.

Importantly, however, there remain individual and developmental differences in the extent to which narrative meaning-making is related to higher levels of well-being, both in adults and in adolescents. Overall, research on expressive writing with adults supports the idea that constructing more coherent and emotionally expressive narratives is related to higher levels of well-being, but closer investigation of this effect suggest that males may benefit more than females (Smyth, 1998), and writing about some types of traumatic events, such as bereavement, may not benefit well-being (see Park, 2010, for an overview). Specific to adolescence, Bohanek and Fivush (2010) found that 13- to 16-year-old adolescent males who told personal narratives richer in internal state language displayed higher levels of well-being, but there were no relations between internal state language in personal narratives and well-being for adolescent females. In contrast, McLean, Breen, and Fournier (2010), found that early adolescent boys who reported they had gained more insights about their turning-point experiences showed poor well-being, but this relationship disappears later in adolescence. Life context matters as well. Greenhoot and colleagues (2008) found that teens exposed to recent family violence produced shorter, and more generic memories, as well as fewer negative memories during the autobiographical memory test than other teens, and those with higher depression scores produced more overgeneral memories in this task than teens who were not depressed.

Findings of developmental, gender, and individual differences in relations between narrative meaning-making and well-being call for a more nuanced understanding of this process. McLean and Mansfield (2011) have argued that, for certain people, reflecting on and reasoning (i.e., attempts at meaning) about past life events, especially challenging events, might be detrimental to well-being (see Park, 2010, as well for a more global review of individual differences in meaning-making). Specifically, McLean and Mansfield suggest

that, for individuals who had especially challenging lives, the continued experience of stressful and challenging events may not lend itself to beneficial meaning-making. As indicated by Breen & McLean (2011) the nature of the specific negative experiences themselves, situated within the larger context of a life history of challenging events, leave them with no “productive” option for meaning-making.

In addition to this, several theorists have also suggested that resilience and greater well-being in spite of traumatic pasts may stem from personal characteristics, such as optimism, and hardiness, which they argue precludes the need for narrative meaning-making (Pressman & Bonanno, 2007; Westphal & Bonanno, 2007). Also, locus of control, or self-efficacy, may allow one to feel that they have control over one’s life, especially one’s future, and therefore they do not need to make sense of the past. In this case, we might expect that individuals high in internal locus of control (i.e., low in external locus of control) would have higher levels of well-being. Thus, for some people it may be most psychologically adaptive to spend less time reasoning about and trying to make meaning from their troubled pasts, and instead simply “put the past in the past” in order to move forward.

In sum, there are mixed findings regarding the association between meaning-making and psychological well-being among adolescents that begs for a closer examination of individual differences. Expanding the research on narrative meaning-making to adolescents who have experienced especially challenging lives is critical for both theory and intervention because it offers a test of theoretical claims that, for some, meaning-making may not facilitate better psychological well-being. Thus, intervention approaches incorporating narrative reflection and reasoning may not be appropriate for all. We had the opportunity to explore the association between narrative meaning-making and psychological well-being among an at-risk sample of low socioeconomic status urban, inner-city African-American adolescent females with challenging lives (i.e., experience with a multitude of negative and traumatic events in adolescence).

We note at the outset that this was a small female-only sample due to logistic and pragmatic factors inherent in the larger study from which this sample was drawn, but this is a critical population in that we are able to address questions about narrative meaning-making in the context of highly challenging lives. Further, because we were able to take advantage of a larger intervention study, we have a large amount of demographic and individual differences information about these young women. Thus we were able to explore the extent to which life history factors (such as poverty, impoverished living conditions, and magnitude of trauma exposure), personality measures (locus of control and Big Five Personality Traits), and narrative indicators of meaning-making (as measured by coherence, inclusion of internal state language, and reflective insight scores) relate to reports of several indicators of psychological well-being (depressive symptoms and self-esteem) in an attempt to better understand which factors are most highly associated with well-being among this sample. Although we were not able to examine possible gender differences, because previous research suggest that male adults and adolescents may benefit more from narrative meaning-making than females (Bohanek & Fivush, 2010; Frattoroli, 2006), we argue that it is theoretically important to examine gender groups separately to gain a better understanding of possible differences in process and relations for males and females in narrative meaning-making. Therefore, we see this research as a first step in expanding the narrative meaning-making research in ways that will help us better understand individual differences in how and when narrative meaning-making may be beneficial and/or detrimental.

Method

Participants

Participants in this study were part of a larger randomized controlled trial evaluating a sexual risk reduction intervention for young African-American females. In addition to measures collected as part of the larger study, a supplemental data collection occurred after the completion of the parent study. The purpose of this supplemental data collection was to assess participants' opinions regarding the intervention, as well as to collect more detailed life-history data related to stress, trauma and coping with negative life experiences. Twenty-four African-American females between the ages of 16 and 21 years (mean age = 18.33 years, SD = 1.46) participated in the narrative elicitation interviews conducted after the completion of the main trial.

Eligibility criteria for this supplemental study included being a HORIZONS (the lay name of the intervention) participant randomized to the intervention condition (eligibility criteria for the HORIZONS trial included self-identifying as African-American, seeking sexual health services at local clinics, ages 15-21 years, unmarried, not pregnant, and report having sex at least once in the past 60 days), completion of the intervention workshops and completion of at least one post-intervention follow-up assessment. Eligible participants were recruited through phone calls or mailed invitations. Prior to assessment, participants provided written informed consent to be interviewed and audio recorded. Participants were compensated \$25 upon completion of the interview. All procedures were approved by Emory University's IRB.

Procedures

In addition to their completion of a 40-minute audio computer assisted interview (ACASI) upon enrollment into the parent study, as part of the supplemental study young women were interviewed by one of 4 trained female research assistants in a private room in a health clinic. Of interest to this study, the supplemental study data collection included the elicitation of participants' narratives about one self-selected negative past event, using the following prompt: "I want you to think about the worst, most negative experience of your life. This should be an extremely emotional issue that has affected you and your life. Can you tell me about that experience, and your thoughts and feelings about that experience?" At the end of each narrative, the researcher prompted for more information by asking if there was anything else to add. All interviews were audio recorded, transcribed verbatim, and checked for accuracy. Due to the sensitive nature of the narratives under discussion, we had a licensed clinical psychologist on call in the event a participant seemed distressed by the task. Additionally, every participant was offered the opportunity to talk with a psychologist if they wished to post-participation. No participants required/requested psychological services.

As discussed in the introduction, we assessed a variety of life history measures, personality measures, and narrative variables in order to examine how each set of variables might relate to psychological well-being.

Life history measures

Age—Current age at baseline assessment was assessed by asking, "How old are you (in years)?"

Socioeconomic status—Receiving federal assistance for living expenses was assessed by four questions. Adolescents were asked, "In the past 12 months, did you or anyone you live with receive any money or services from any of the following?" (1) Welfare (including

TANF [Temporary Assistance to Needy Families] or SSI), (2) Food stamps, (3) WIC (Women, Infants, and Children), and (4) Section 8 housing (Housing subsidies). Response choices were *yes* (1) or *no* index of family aid, with higher scores indicating receipt of more family aid. This construct was included as an approximation of socioeconomic status.

Neighborhood quality—Neighborhood quality was assessed by asking adolescents three questions with the same stem, “On your street, are there any of the following?” (1) Abandoned homes or apartments, (2) Buildings with broken windows, and (3) Homes with bars on the windows and doors. Response choices were *yes* (1) or *no* (0). Responses for all three questions were summed to create an index of neighborhood quality, with higher scores indicating poorer neighborhood quality (Cohen et al., 2000). This construct was included as another approximation of socioeconomic status.

History of violence or victimization—The 9-item violence/personal victimization subscale of the Multicultural Events Schedule for Adolescents (Gonzales, Gunnoe, Jackson, & Samaniego, 2007) was used to assess lifetime experiences with violence and victimization. For each item, participants indicate if that has ever happened to them in their lifetime. Sample items include, “Someone close to you got shot or attacked”, “You saw someone being threatened with a knife or gun”, and “You were physically attacked by someone not in your family.” A score is created based on the total number of events endorsed. Higher scores indicate greater experience of/exposure to violence and/or victimization.

Current alcohol use—Participants’ recent alcohol use was assessed by asking, “In the past 60 days, how many days have you used alcohol?” Participants entered the number of days, with options ranging from 0 to 60 days.

Current marijuana use—Participants’ recent marijuana use was assessed by asking, “In the past 60 days, how many days have you used marijuana?” Participants entered the number of days, with options ranging from 0 to 60 days.

Personality measures

Locus of control—Locus of control was measured by a modified, four item version of Pearlin and Schoolers’ Mastery scale (Pearlin & Schooler, 1978). The items referred to generalized locus of control (e.g., “I have little control over the things that happen to me”). Each item was answered on a four-point Likert-type scale; with responses ranging from *strongly disagree* to *strongly agree*. Responses were coded so that higher scores indicated a greater external locus of control (i.e., lower internal locus of control). Cronbach alpha for the scale was .64.

The Big Five Inventory (BFI)—The 44-item BFI (John, Donahue, & Kentle, 1991), provides a score for each of the Big Five personality traits (Conscientiousness, Agreeableness, Emotional Stability/Neuroticism, Extraversion, and Openness). Higher mean scores for each personality trait reflect higher endorsement of characteristics for that particular trait. Cronbach alphas for the 5 subscale of the BFI (Conscientiousness, Agreeableness, Emotional Stability/Neuroticism, Extraversion, and Openness) were .71, .65, .74, .60 and .56, respectively.

Narrative measures

Internal States—Narratives were coded for internal state language which comprised mention of emotional content and cognitive state. Coders identified and counted each instance to create a total score for the narrative. Emotional content included mention of a

specific emotions or emotional actions, (i.e. “sad, love, crying”) as well as affective evaluations, (i.e. “It was so difficult for us). Emotional content was then sub-coded by valence as either positive or negative. Cognition words included thoughts, beliefs, and desires, (i.e. “understood, wanted, expected”). Because the narratives in this study were relatively brief in length, there were many narratives that expressed very little internal state language; thus, in obtaining reliability, two coders coded all the narratives and resolved any disagreement through discussion. Coders achieved a Cohen’s Kappa of .88 before discussion. We note that due to low frequency of each type of internal state word, we calculated reliability across internal state words. Kappa was calculated as the proportion of internal states (words and phrases) that were identified and correctly categorized compared to those that were missed by one coder or not categorized the same way by both coders. We further note that the vast majority of internal states words referenced the speakers’ internal states, so possible differences in reference were not further considered.

Coherence—Coherence was assessed along three dimensions of coherence, each on a scale of 0-3, with higher scores reflecting higher levels of coherence, as described by Reese et al., (in press); chronology, context, and theme. Coders coded 25 percent of the narratives on each dimension for reliability and intraclass correlations were computed. Chronology refers to the extent to which the narrator arranged the events that occurred in a temporal order ($r = .77$). Context refers to the extent to which the narrator situated the events of the story in a specific location and time ($r = .81$). Theme refers to the extent to which the narrator stayed on topic, elaborated on the events in the story. In order to reach the highest score in Theme, the narrator must have concluded the story by providing a resolution or link to other autobiographical events ($r = .97$).

Growth—Personal growth from narrative was assessed using the Growth coding scheme described by Mansfield, McLean, and Lilgendahl (2010). This scheme captured the extent to which the participant expressed personal change from the event and whether such change was positive or negative. Scores ranged from 1, indicating negative change in the self or world-view as a result of the event, to 5, indicating positive self-transformation and insight gained, with 3 indicating no impact or neutral/mixed impact on the self. Cronbach’s alpha was .76 and coders settled disagreements through discussion.

Reflective Insight—Reflective insight was scored on scale of zero to three, as described by McLean and Pratt’s meaning-making scale, (2006). A score of zero was assigned to narratives in which there is no reflection on the personal meaning of the event to the speaker. A score of one was assigned to narratives in which the speaker expresses a concrete lesson that has been learned from the experience. A score of two was assigned to narratives in which the narrator expresses a vague sense of meaning, in which something is learned about the self or the self is considered to be changed, but in an unspecific way. A score of three was assigned to narratives in which the speaker mentions specific personal change, growth, or insight as a result of the experience, thereby demonstrating a new worldview or self-understanding. Coders achieved Cronbach’s alpha of .97.

Psychological well-being measures

Depressive symptomatology—Depressive symptoms were assessed with the 8-item Center for Epidemiological Studies-Depression scale (CES-D) (Melchoir, Huba, Brown & Reback, 1993). The CES-D assesses the presence of depressive symptoms in the past 7 days and has been shown to be a valid measure of depressive symptoms (Radloff, 1991). Participants rated each item from 1 (less than one day) to 4 (five to seven days), with higher scores indicating higher levels of depressive symptomatology. Sample statements include, “I felt sad” and “I had crying spells.” Cronbach’s alpha was .89.

Self-esteem—The Rosenberg Self-Esteem Scale (Rosenberg, 1965), a 10-item scale, was used to measure global self-esteem. This 10-item scale measures global self-esteem with four response categories ranging from 1 (“strongly agree”) to 4 (“strongly disagree”). Sample items included: “I feel that I am a person of worth,” and “I take a positive attitude toward myself.” Higher scores indicate higher levels of self-esteem. The Cronbach alpha for the scale was 0.86.

Results

To explore associations between life history, personality, narrative measures, and psychological well-being measures Pearson’s correlations were conducted. Variables significantly correlated with the psychological well-being measures (i.e., outcome variables) were entered into multivariable linear regression models to determine which variable predicted each outcome measure while accounting for the other variables in the model.

Descriptive statistics

Participants were asked to provide narratives about the worst, most negative experience of their lives. To provide a more detailed understanding of the narratives provided by the young women in this study, Table 1 provides a description of the negative events narrated. Categories of events that became apparent within this dataset were Deaths, Abuse, Hardships, Accidents, and Arguments. A perusal of the specific sub-types of events nominated illustrate that many of these women had experienced trauma or situations of extreme difficulty throughout their lives.

Means and standard deviations for all study variables are presented in Table 2. Appendix 1 illustrates some representative narratives from this dataset. On each narrative, the words scored as internal state language are bolded, and at the bottom of each narrative, we provide the scores on each coherence dimension, reflective insight and growth. We note that the full range of scores on reflective insight was not observed. Specifically, there were no narratives that received a “2” for “vague meaning.” Further, intercorrelations among personality (Table 3) and narrative variables were explored (Table 4). Few significant correlations were observed between the personality variables. For the narrative variables, not surprisingly, total word count was highly correlated with the majority of the specific narrative variables, hence indicating its utility as a control variable in multivariable analysis. Additionally, emotion variables (positive and negative) were highly correlated with cognitive words, however, not exceedingly so. Thus, we opted to leave them as separate variables for the remaining analyses. Finally, we examined the correlations between the personality variables and narrative variables. Only one significant correlation emerged between Extraversion and total word count ($r = .44$, $p = .03$), indicating that more extraverted individuals produced longer narrative accounts.

Correlations with psychological well-being outcome measures

Table 5 presents the correlations between all study variables with each of the two outcome variables; self-esteem and depressive symptomatology. None of the life history variables were significantly correlated with the psychological well-being measures. For the personality variables, locus of control was significantly positively correlated with depressive symptomatology and negatively correlated with self-esteem. Only 2 of the 5 personality subscales were significantly related to psychological well-being; conscientiousness was positively correlated with self-esteem and neuroticism was negatively correlated with self-esteem. For the narrative variables, several measures were significantly related to the 2 outcome variables. Specifically, overall word count, total cognition words, total positive

emotion, and reflective insight scores were all positively related to depressive symptomatology scores in this sample of young African-American women.

Regression models predicting psychological well-being

Given that multiple narrative variables were significantly related to the depressive symptoms scores, only one regression analysis was conducted predicting depressive symptomatology scores. Locus of control, total cognition words, total positive emotion, reflective insight scores, and total word count were entered as predictor variables in the model. The overall model was significant ($F(5,22) = 3.85, p = .016; R^2 = .53; \text{Adjusted } R^2 = .39$), with locus of control ($\beta = .46, p = .04$) remaining significantly associated with depressive symptomatology, and total cognition words ($\beta = .93, p = .07$) marginally associated with depressive symptomatology.

Discussion

In this study we sought to explore the association between narrative indicators of meaning-making and psychological well-being, while also considering the role of individual level factors such as life history, personality characteristics and locus of control, among an at-risk sample of low socioeconomic status urban, inner-city African-American adolescent females with challenging lives. Overall, we found some expected associations between personality and psychological well-being, but surprising findings between life history variables and well-being, as well as between narrative meaning-making and well-being.

As argued by Westphal & Bonanno (2007) and Pressman & Bonanno (2007), resilience and greater well-being in spite of traumatic pasts might result from personal characteristics such as locus of control and optimism in place of meaning-making. In short, for individuals who have experienced challenging lives it might be healthier not to reason about past events. We found that among our at-risk sample, at the bivariate level certain personality characteristics (conscientiousness, neuroticism and locus of control) were significantly associated with self-esteem, but the narrative variables were not. Thus, similar to prior work on resilience, personality factors appear important for a positive sense of self (Garmezy, 1981; 1983). However, the patterns for depression were quite different; in our sample, personality characteristics were not related to depressive symptoms but having a more external locus of control was significantly related to having higher levels of depressive symptoms (as were narrative meaning-making variables, as discussed in more detail below). The extent to which an individual feels they have control over their life and that they have the ability to affect things in their environment has been an important factor in the coping process (Lazarus, 1966), and has been positively associated with resiliency among a variety of samples (Garmezy, 1981; 1983; Werner & Smith, 1982). Thus, not surprisingly, for the adolescent females in this at-risk sample of youth, those reporting having little control over the events in their lives had higher levels of depressive symptoms, even in multivariable models including meaning-making measures, than those with a more internal locus of control.

Perhaps most surprising, we found that life history factors (age, SES, neighborhood factors, trauma history, alcohol and drug use) were not significantly related to psychological well-being in this sample. Given the life histories of the young women in this sample, with many residing in impoverished neighborhoods and reporting high levels of violence exposure, one might expect that these factors would be directly associated with psychological well-being. We note that, although all of these adolescent females had challenging lives, there was variability in the life history measures, so the lack of relations is not a methodological artifact. Rather, we suggest that the way in which one makes sense of these experiences will be critical for outcome. Yet, our findings with regard to narrative meaning-making appear, at first, to be counterintuitive.

In fact, our findings suggest that greater narrative meaning-making, measured by the inclusion of more cognitive processing words, positive emotion, and greater reflective insight, in their narratives about a highly negative event was associated with higher depressive symptoms. The bivariate correlations between narrative meaning-making and depressive symptoms suggests that trying to make meaning of difficult events in the context of a challenging life may be detrimental, and is in line with the interpretation of our results associating external locus of control with depression. For individuals facing ongoing challenge, it may be more adaptive to simply move forward and assume one can change the future rather than to try to make sense of a past that may simply be senseless.

Although these narrative indicators of meaning-making were significantly associated with higher depressive symptoms at the bivariate level, in a multivariable analysis only the inclusion of more cognitive processing words remained marginally related to higher depressive symptoms. In light of our small sample size we feel that even a marginal association can be interpreted with caution. The role of cognitive processing words is particularly interesting in light of recent arguments in the meaning-making literature, which suggests that cognitive processing words reflect efforts after meaning rather than meaning made (Boals, Banks, Hathaway & Schuettler, 2011). If cognitive processing words reflected meaning made, we might have expected a relation between cognitive processing words and personal growth, either negative or positive. But, in fact, these narrative characteristics were unrelated and in this sample we found very little personal growth, either negative or positive, expressed in the narratives. These adolescents do not seem to be using their experiences as a springboard for movement toward a new understanding of self. Taken together, the findings suggest that the narrative meaning-making variables assessed in this study may reflect unsuccessful efforts after meaning, and may be more similar to rumination than to resolution. Thus, the pattern of findings between the narrative meaning-making indicators and psychological well-being provide some support to prior theoretical claims and empirical findings that for certain individuals from challenging backgrounds efforts after meaning might not be psychologically healthy (McLean & Mansfield, 2011; Park, 2010; Breen & McLean, 2011).

In further support of this interpretation, a meta-analysis by Mor and Winquist (2002) concluded that mal-adaptive self-reflection in the form of rumination was strongly and consistently related to depressive symptoms. Specific to personal narratives of negative events, including a great deal of cognitive processing words and emotion words could be reflective of unsuccessful attempts at meaning-making rather than an indicator of successful meaning-making. Our findings support this position as the young women who included more cognitive processing language into their personal narratives of a highly negative past experience reported higher levels of depressive symptoms. However, moving forward it will be important to contextualize, both within the event-level narrative as well as within the larger challenging life story, the inclusion of cognitive and emotional language in adolescents' personal narratives as it relates to well-being. Although not possible to disentangle the acute event from the challenging life contexts of our participants in the current study, doing so in future research is necessary in order to better determine if this language is indeed reflective of successful or unsuccessful efforts towards meaning.

Our findings raise the larger question of whether narrating events in the context of challenging lives is ever beneficial. Of course we cannot answer this from our data, but based on the developmental literature, we speculate that in the absence of a structured, scaffolded model of narrative meaning-making, it may be difficult for these young women to create narratives that provide beneficial effects. More specifically, Fivush and Sales (2006) found that preadolescents coping with highly difficult experiences related to their asthma relied on their mothers to help them structure more emotionally regulated narratives.

It was maternal ability to scaffold more coherent, emotionally expressive and explanatory narratives that related to children's coping abilities. It may be that in the context of challenging lives, the adolescents in this study did not have more narratively competent adults to help them learn how to use narrative meaning making in the service of coping and adjustment. This interpretation is in line with the generally positive effects of therapeutic intervention, which in many ways is related to restructuring narratives of difficult experiences (e.g., White & Epston, 1990). Narratives are constructed within social interactions, and therefore, we may need to look more closely at social interactions to determine if and when narrative meaning making is beneficial or detrimental (Fivush, 2007).

Of course, we must acknowledge several limitations to this study. Most obvious, due to small sample size and recruitment through HORIZONS eligibility requirements, our findings may not generalize across all young women in this particular population. In addition, the small sample size precluded the ability to conduct full mediational models. Specifically, although not directly associated with well-being, life history factors, such as trauma history, may be indirectly associated with psychological well-being through their association with other constructs such as meaning-making. Given our small sample size we were not able to explore these more complex, indirect paths but we believe it is important to assess and account for the life histories of adolescents in order to both better understand and interpret personal narratives of specific experiences, especially highly negative or traumatic experiences, as they related to psychological well-being. Furthermore, gender differences in these relations should also be explored within the urban African-American community. Additionally, it is important to note this analysis was cross-sectional. Making meaning from past experiences is a process that occurs over time; however, the time course of meaning-making and the changes in the meaning-making process that may occur over time is not explicitly known (Park, 2010). For instance, another interpretation of the association between cognitive processing language and higher depressive symptoms is that the processing occurring during the narrative process has not yet yielded positive benefits yet, but may overtime. Also, the relations between meaning-making and well-being may vary across development (McLean, Breen, & Fournier, 2010). For these reasons, longitudinal studies on narrative meaning-making in this population are needed. Finally, cultural differences in autobiographical narratives and relations between narratives and emotional regulation have been demonstrated between Western individualistic cultures and Eastern collectivist culture broadly conceptualized (Wang & Brockmeier, 2002). There is some suggestion that African-American culture is more relational/collectivist than individualistic (Genero, 1995), so it is possible that our findings could reflect cultural differences in narrating about the past. Little research on narrative meaning-making has targeted African-American populations, thus we do not know the extent to which cultural differences could account for our findings.

However, we argue that this study represents a small step in expanding the narrative meaning-making literature to an under studied and important group of individuals, those who live in challenging life contexts every day. Importantly, our findings provide some support for the notion that the process of making meaning from the negative events in one's past may not be beneficial, and instead it may actually be detrimental for some young people with particular characteristics or life histories (Breen & McLean, 2011; McLean & Mansfield, 2010; Bonanno, 2005). Specifically, for individuals who have lived highly challenging lives, with frequent stressful encounters, reasoning about and trying to situate another negative event into their already negative life story may be psychologically damaging. As argued by Bonanno (2005), those who do not attempt to make meaning of negative events may be better off than those who do, as doing so for some (i.e., those from especially challenging backgrounds) is akin to rumination and is thus reflective of distress. The adolescent African-American females in this study live in environments that are

incredibly difficult, and have experienced a multitude of negative life experiences even as adolescents. And, overall, they included very few narrative indicators of meaning-making in their personal narratives, but for those who did include more frequent indicators of attempts at meaning-making, they reported higher levels of depressive symptoms. Thus, it appears that for adolescent females with challenging lives perhaps not engaging in narrative meaning-making, and instead bolstering other potentially protective characteristics such as internal locus of control, is the best approach for better psychological well-being.

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Appendix 1

Sample Narratives

Sample narrative 1

I guess the most bad and negative is when we, I would say me and my mother got into an argument, or an altercation, and we weren't close for awhile and I felt like I didn't have anyone, I felt like I didn't have no family, you know. And me being an only child I grew up, um, not staying with my mother but staying with other relatives, other family members. But I'd see my mother like on the weekends or any school events she was a part of, so she was still, you know, very active in my life. But, as growing up my mother wanted to be a friend and not my mother. And I wanted a mother. And so, just me and her, you know, getting into it, I'm growing up and, I can, we had like, we, I never argued at her like you know how you never talk back to your parents and things like that. I mean we were yelling at each other and I left, we didn't talk for maybe like two months, she didn't call me, I didn't call her, we were like strangers. I would, you know, I would be like, I would leave a message on the answering machine to let her know if I was going out of town or if I was coming by the house to get something like, and I would make sure she was at work so I wouldn't have to see her. Or, you know like, and so she'd be like she didn't get my message because if I wanted to communicate with her you know I'd call her and not leave a message and you know, that was not right. And so, I think that was like a bad experience. I just, I just really felt alone at that time I didn't have my mom.

Sample Narrative 1 Coding Scores: Coherence Context = 0; Coherence Chronology = 2; Coherence Theme = 3; Growth = 3; Reflective insight = 0

Sample narrative 2

Um probably when my mom died... Yeah, I was in 8th grade. She had um...she caught AIDS through a blood transfusion and started counseling, she had a bad heart... That was my favorite person in the world.

Sample Narrative 2 Coding Scores: Coherence Context = 1; Coherence Chronology = 2; Coherence Theme = 1; Growth = 3; Reflective insight = 0

Sample narrative 3

Ok well actually when I was twelve years old, um the first time I ever had sex I was raped, you know what I'm saying? So that was something that I had to like deal with and had to

grow from you know, I had to teach myself that you know it wasn't my fault. You know I had like I just treat myself like I wasn't nothing you know what I'm saying but I had to get, get back to life and that's what I had to like teach myself so that was one of the, the worst experiences of my life but I made it through that.

Sample Narrative 3 Coding Scores: Coherence Context = 1; Coherence Chronology = 3; Coherence Theme = 3; Growth = 5; Reflective insight = 3

Sample narrative 4

Um when I first moved to Atlanta, I think I was about five, I was, we kept on moving back and forth 'cause we been here like, I could say from one apartment to another just trying to find out which place would be better...I guess my mother (unintell.) raise me. And I think I was over at a friend's house, and I was on the other side of the street and this girl that I went to school with, we were in middle school she was on the other side of the street and she was walking behind a boy and there was a car going um past them and the boy actually got shot and fell on her...and I was like don't need to come over here no more because that was pretty dangerous. I never saw anybody get shot and then it was so close to my friend 'cause I was like what if she woulda been standing in front of him so that was kinda like, it kinda shocked me but...

Sample Narrative 4 Coding Scores: Coherence Context = 3; Coherence Chronology = 3; Coherence Theme = 2; Growth = 3; Reflective insight = 1

References

- Baerger DR, McAdams DP. Life Story Coherence and its Relation to Psychological Well-Being. *Narrative Inquiry*. 1999; 9(1):69–96.
- Bartlett, FC. *Remembering: A study in experimental and social psychology*. New York: Cambridge; 1932.
- Bauer PJ, Stark E, Lukowski A, Rademacher J, Van Abbema D, Ackil J. Working together to make sense of the past: Mothers' and children's use of internal states language in conversations about traumatic and nontraumatic events. *Journal of Cognition and Development*. 2005; 6(4):463–88.
- Beyers W, Goossens L, Vansant I, Moors E. A structural model of autonomy in middle and late adolescence: Connectedness, separation, detachment, and agency. *Journal of Youth and Adolescence*. 2003; 32:351–365.
- Boals A, Banks JB, Hathaway LM, Schuettler D. Coping with stressful events: Use of cognitive words in stressful narratives and the meaning-making process. *Journal of Social and Clinical Psychology*. 2011; 30:378–403.
- Bohanek JG, Fivush R. Personal narratives, well-being, and gender in adolescence. *Cognitive Development*. 2010; 25(4):368–379.
- Bonanno GA. Resilience in the face of potential trauma. *Current Directions in Psychological Science*. 2005; 14:135–138.
- Breen, AV.; McLean, KC. Narrative meaning-making in adolescents: Risks of reflecting on difficult experiences. Poster presented at Society for Research in Child Development; Montreal, Canada. March, 2011; 2011.
- Bruner J. Life as narrative. *Social Research*. 1987; 54:11–32.
- Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*. 1989; 56:267–283. [PubMed: 2926629]
- Erikson, E. *Youth and Identity crisis*. New York: Norton; 1968.
- Fivush R. Maternal Reminiscing Style and Children's Developing Understanding of Self and Emotion. *Clinical Social Work Journal*. 2007; 35(1):37–46.
- Fivush R, Baker-Ward L. The Search for Meaning: Developmental Perspectives on Internal State Language in Autobiographical Memory. *Journal of Cognition and Development*. 2005; 6:455–462.

- Fivush R, Bohanek JG, Zaman W, Grapin S. Gender differences in adolescents' autobiographical narratives. *Journal of Cognition and Development*. in press.
- Fivush, R.; Haden, C. Narrating and representing experience: Preschoolers' developing autobiographical recounts. In: van den Broek, P.; Bauer, PA.; Bourg, T., editors. *Developmental Spans in Event Comprehension and Representation: Bridging Fictional and Actual Events*. Mahwah, NJ: Erlbaum; 1997. p. 169-198.
- Fivush R, Habermas T, Waters TEA, Zaman W. The making of autobiographical memory: Intersections of Culture, Narratives and History. *International Journal of Psychology*. in press.
- Fivush R, Marin KA, Crawford M, Brewin CR, Reynolds M. Children's narratives and well-being. *Cognition & Emotion*. 2007; 21:1414-1434.
- Fivush R, Sales JM. Coping, attachment and mother-child narratives of stressful events. *Merrill-Palmer Quarterly*. 2006; 52:125-150.
- Frattaroli J. Experimental disclosure and its moderators: a meta-analysis. *Psychological bulletin*. 2006; 132(6):823-65. [PubMed: 17073523]
- Garnezy, N. Children under stress: Perspectives on antecedents and correlates of vulnerability and resistance to psychopathology. In: Rabin, AI.; Aronoff, J.; Barclay, AM.; Zucker, RA., editors. *Further Explorations in Personality*. New York: Wiley; 1981. p. 196-270.
- Garnezy, N. Stressors of childhood. In: Garnezy, N.; Rutter, M., editors. *Stress, Coping & Development in Children*. New York: McGraw-Hill; 1983. p. 43-84.
- Genero, N. Culture, resiliency, and mutual psychological development. In: McCubbin, HI.; Thompson, EA.; Thompson, AI.; Futrell, JA., editors. *Resiliency in African American Families*. Thousand Oaks, CA: Sage; 1995.
- Gonzales NA, Gunnoe ML, Jackson KM, Samaniego RY. Validation of a multicultural events scale for urban adolescents. *Journal of Community Psychology*. 2007
- Greenhoot, AF.; Bunnell, SL.; Cutis, JS.; Buyer, AM. Trauma and Autobiographical Memory Functioning. In: Howe, ML.; Goodman, GS.; Cicchetti, D., editors. *Stress, Trauma, and Children's Memory Development: Neurobiological, Cognitive, and Legal Perspectives*. New York: Oxford; 2008.
- Habermas T, Bluck S. Getting a life: Emergences of the life story in adolescences. *Psychological Bulletin*. 2000; 126(5):748-769. [PubMed: 10989622]
- Habermas T, Paha C. The development of coherence in adolescents' life narratives. *Narrative Inquiry*. 2001; 11:35-54.
- Habermas T, de Silveira C. The development of global coherence in life narratives across adolescence: Temporal, causal, and thematic aspects. *Developmental Psychology*. 2008; 44:707-721. [PubMed: 18473638]
- Harter, S. *The Construction of the Self: A Developmental Perspective*. New York, NY, US: Guilford Press; 1999.
- John, OP.; Donahue, EM.; Kentle, RL. *The Big Five Inventory: Versions 4a and 54*. Technical report, Institute of personality and social research, University of California; Berkeley, CA: 1991.
- King LA, Scollon CK, Ramsey C, Williams T. Stories of life transition: Subjective well-being and ego development in parents of children with Down syndrome. *Journal of Research in Personality*. 2000; 34:509-536.
- Lazarus, RS. *Psychological Stress and the Coping Process*. New York: McGraw Hill; 1966.
- Mansfield CD, McLean KC, Lilgendahl JP. Narrating traumas and transgressions: Links between narrative processing, wisdom, and well-being. *Narrative Inquiry*. 2010; 20(2):246-273.
- Marin KA, Bohanek JG, Fivush R. Positive effects of talking about the negative: Family narratives of negative experiences and preadolescents' perceived competence. *Journal of Research on Adolescence*. 2008; 18:573-593.
- McAdams, DP. Unity and purpose in human lives: The emergence of identity as a life story. In: Zucker, RA.; Rabin, AI.; Aronoff, J.; Frank, S., editors. *Personality Structure in the Life Course: Essays on Personology in the Murray Tradition*. New York: Springer; 1992. p. 328-375.
- McLean KC, Breen AV, Fournier MA. Constructing the self in early, middle, and late adolescent boys: Narrative identity, individuation, and well-being. *Journal of Research on Adolescence*. 2010; 20(1):166-187.

- McLean K, Mansfield C. To reason or not to reason: Is autobiographical reasoning always beneficial? *New Directions for Child and Adolescent Development*. 2011; 2011(131):85–97. [PubMed: 21387534]
- McLean, K.; Pasupathi, M., editors. *Narrative Development and Adolescence: Creating the Storied Self*. New York: Springer; 2010.
- McLean KC, Pasupathi M, Pals JL. Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review*. 2007; 11(3):262–278. [PubMed: 18453464]
- McLean KC, Pratt MW. Life's little (and big) lessons: Identity status and meaning-making in the turning point narratives of emerging adults. *Developmental Psychology*. 2006; 42:714–722. [PubMed: 16802903]
- Melchior LA, Huba GJ, Brown VB, Reback CJ. A short depression index for women. *Educational and Psychological Measurement*. 1993; 53(4):1117–1125.
- Mor N, Winquist J. Self-focused attention and negative affect: A meta-analysis. *Psychological Bulletin*. 2002; 128(4):638–662. [PubMed: 12081086]
- Murphy, A.; Fivush, R.; Sales, R.; Teague, G. Children's narratives of scary asthma events in relation to emotional well-being. Poster presented at the meetings of the Midwestern Society for Pediatric Psychology; Kansas City. 2009 Apr.
- Park CL. Making sense of the meaning literature: An integrative review of meaning making and its effects on adjustment to stressful life events. *Psychological Bulletin*. 2010; 136(2):257–301. [PubMed: 20192563]
- Pearlin LI, Schooler C. The structure of coping. *Journal of Health and Social Behaviour*. 1978; 19:2–21.
- Pennebaker, JW. *Opening Up: The Healing Power of Expressing Emotions*. New York, NY: Guilford Press; 1997.
- Pennebaker, JW.; Chung, CK. Expressive writing and its links to mental and physical health. In: Friedman, HS.; Friedman, HS., editors. *Oxford Handbook of Health*. Vol. 78712. Oxford University Press; 2007.
- Pressman DL, Bonanno GA. With whom do we grieve? Social and cultural determinants of grief processing in the United States and China. *Journal of Social and Personal Relationships*. 2007; 24(5):729–746.
- Radloff LS. The use of the Center for Epidemiologic Studies Depression Scale in adolescents and young adults. *Journal of Youth and Adolescence*. 1991; 20(2):149–166.
- Reese E, Haden CA, Baker-Ward L, Bauer PJ, Fivush R, Ornstein PA. Coherence in personal narratives: A multidimensional model. *Journal of Cognition and Development*. in press.
- Reese, E.; Yan, C.; Jack, F.; Hayne, H. Emerging identities: Narrative and self from early childhood to early adolescence. In: McLean, KC.; Pasupathi, M., editors. *Narrative Development in Adolescence*. New York: Springer; 2010.
- Reynolds M, Brewin CR, Saxton M. Emotional disclosure in school children. *Journal of Child Psychology and Psychiatry*. 2000; 41(2):151–159. [PubMed: 10750541]
- Rosenberg, M. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press; 1965.
- Sales JM, Fivush R, Parker J, Bahrack L. Stressing memory: Long-term relations among children's stress, recall and psychological outcome following Hurricane Andrew. *Journal of Cognition and Development*. 2005; 6(4):529–545.
- Smyth JM. Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology*. 1998; 66:174–184. [PubMed: 9489272]
- Soliday E, Garofalo JP, Rogers D. Expressive writing intervention for adolescents' somatic symptoms and mood. *Journal of Clinical Child and Adolescent Psychology*. 2004; 33(4):792–801. [PubMed: 15498746]
- Wang Q, Brockmeier J. Autobiographical remembering as cultural practice: understanding the interplay between memory, self and culture. *Culture & Psychology*. 2002; 8(1):45–64.
- Werner, EE.; Smith, RS. *Vulnerable but Invincible: A Study of Resilient Children*. New York: McGraw-Hill; 1982.

Westphal M, Bonanno GA. Posttraumatic growth and resilience to trauma: Different sides of the same coin or different coins? *Applied Psychology*. 2007; 56(3):417–427.

White, M.; Epston, D. *Narrative means to therapeutic ends*. New York: W.W. Norton; 1990.

Table 1

Description of Narrative Events

Categorization	Total
Death	7
Family Member	4
Significant Other	2
Stranger	1
Accidental	1
Violent	3
Illness/ Unexplained	3
Abuse	6
Physical	1
Emotional	1
Sexual	4
Hardship	4
Difficult living conditions	2
Childbirth	1
Getting prosthesis	1
Accidents	2
Vehicle	1
Boyfriend paralyzed	1
Arguments	2
Arguing with Parent	1
Parents' Divorce	1
Other	3
Boyfriend sent to jail	1
Becoming sexually active	1
Pregnancy	1

Table 2

Descriptive information about the study sample and variables

	Mean	SD	Range
Life history			
Age	16.7	1.39	15-19
Family Aid (1 or more)*	7	29.2	0-4
Neighborhood (1 or more)*	10	41.6	0-3
Violence	3.54	2.75	0-9
Alcohol use (# days past 60d)	3.21	6.16	0-20
Marijuana use (# days past 60d)	1.50	3.00	0-10
Psychological well-being			
Depressive symptoms	15.25	7.41	8-30
Self-esteem	34.50	4.55	27-40
Personality			
Locus of control	7.08	2.17	4-10
Agreeableness	4.05	.60	3.00-5.00
Conscientiousness	4.00	.67	2.67-5.00
Neuroticism	2.57	.74	1.38-4.38
Openness	3.67	.51	2.70-4.70
Extraversion	3.83	.63	2.50-4.75
Narrative			
Total word count	135.92	136.37	17-595
Context	1.29	.91	0-3
Chronology	2.83	.38	2-3
Theme	1.58	.88	0-3
Cognition words	2.44	3.40	0-13
Negative emotion (words/affect)	2.38	2.57	0-11
Positive emotion (words/affect)	.96	2.16	0-9
Growth	2.97	.93	1-5
Reflective insight	.63	1.13	0-3

Note:

* = values reported in mean, standard deviation columns for these variables are frequency and percent of sample, respectively.

Table 3

Intercorrelations among personality variables

Personality variables	1	2	3	4	5
1. Locus of control					
2. Agreeableness	.02				
3. Conscientiousness	-.33	.60**			
4. Neuroticism	.35 ⁺	-.39 ⁺	-.45*		
5. Openness	-.03	.11	.17	-.16	
6. Extraversion	-.13	.30	.24	-.43*	.23

Note:

** p .01,

* p .05,

⁺ p .10

Table 4

Intercorrelations among narrative variables

Narrative variables	1	2	3	4	5	6	7	8
1. Total word count								
2. Context	.26							
3. Chronology	-.49*	.25						
4. Theme	.54***	.38 ⁺	-.11					
5. Cognition words	.93***	.42*	-.36	.64***				
6. Negative emotion (words/affect)	.78***	.08	-.51*	.38 ⁺	.72***			
7. Positive emotion (words/affect)	.79***	.07	-.46 ⁺	.24	.72***	.62***		
8. Growth	-.22	-.29	.20	.16	-.28	-.37 ⁺	-.31	
9. Reflective insight	.56***	.07	-.16	.40*	.52*	.33	.47*	.42*

Note:

p .01,*
p .05,⁺
p .10

Table 5

Correlations between life history, personality, narrative and psychological well-being variables

	Self-Esteem	Depression
Life history		
Age	.01	-.28
Family Aid	-.28	.20
Neighborhood	-.13	.18
Violence	.07	.34
Alcohol use	-.28	.29
Marijuana use	.02	.14
Personality		
Locus of control	-.68 **	.54 **
Agreeableness	.09	.15
Conscientiousness	.58 **	-.19
Neuroticism	-.48 *	.33
Openness	.30	-.03
Extraversion	.22	-.17
Narrative		
Total word count	-.16	.43 *
Context	.37 †	.01
Chronology	.14	-.11
Theme	-.09	.34 †
Cognition words	-.06	.48 *
Negative emotion	-.13	.26
Positive emotion	-.11	.45 *
Growth	-.11	-.01
Reflective insight	-.24	.57 **

Note:

**
p .01,*
p .05,†
p .10