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Transformational Processing: Healthy Identity Functioning in Written Narratives of Emotionally Challenging Life Events

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TRANSFORMATIONAL PROCESSING

Healthy identity functioning in written narratives of emotionally challenging life events

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A Thesis

Presented to

The Faculty of the Department of Psychology

The College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree of

Master of Arts

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by

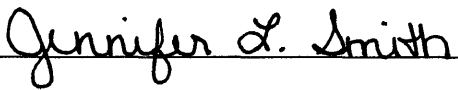Jennifer L. Smith

2003

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This thesis is submitted in partial fulfillment of

the requirement for the degree of

Master of Arts

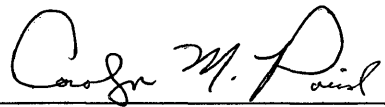_Jennifer L. Smith_

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS

LIST OF TABLES

ABSTRACT

This study examined two main questions: (1) Does writing about emotionally challenging events have benefits for physical and psychological health? and (2) Does transformational processing within writing about emotionally challenging events relate to greater levels of physical and psychological health? While the first question was not supported, various findings supported the second question. Specifically, writing that included healthy affective-cognitive processing (high levels of positive emotion word use, moderate negative emotion word use, increases in insight word use, and increases in causal word use) correlated positively with self-reported personal growth and purpose in life. In addition, writing containing a sense of positive self-transformation, or expressing a positive sense of change as a result of the emotionally challenging event, correlated positively with life satisfaction, personal growth, purpose in life, self-acceptance, and self-concept clarity, as well as correlating negatively with negative affect. Positive self-transformation was also found to be positively related to openness and negatively related to neuroticism. These findings are discussed in relation to current research on the benefits of writing and narrative identity processing.

TRANSFORMATIONAL PROCESSING

Healthy identity functioning in written narratives of emotionally challenging life events

INTRODUCTION

Adolescence and young adulthood are often times of emotional struggle and turmoil while an individual strives to establish a clear identity in the world (Erikson, 1968). The challenge of establishing a clear identity may be especially acute in the days and weeks following an emotionally challenging life even, a time where one is trying to make sense of a nonsensical event that has not only disrupted the comforts of routine daily life but also threatened one's developing identity. The manner in which individuals narrate such events within their identity-defining life stories, even long after the events have occurred, may be very reflective of who they are now, how they will feel in the future, and who they will become (McAdams, 1996). Specifically, certain patterns of narrating difficult life events are indicative of healthy identity development and functioning (e.g. McAdams, 1996; Pals, 2000). In addition, recent research has suggested that a powerful mechanism of coping is writing about emotionally challenging events, a process linked to benefits in both positive physical and psychological health (Pennebaker, 1997). Through integrating the theoretical perspectives of McAdams (1996) and Pennebaker (Pennebaker, 1997; Pennebaker & Keough, 1999), this study proposes that the writing process aids identity and overall well-being by allowing individuals to openly examine and make sense of the impact of emotionally challenging events on the self and to bring these events into a coherent life narrative through seeing the self as positively transformed by the event. This study examines this hypothesis in two ways. First, it experimentally tests the main

effect of writing about emotionally challenging events on physical and psychological well-being. Second, it assesses individual differences in transformational processing within narratives of challenging events and relates these differences to healthy functioning identity and well-being outcomes.

The Impact of Writing about Emotional Events on Physical and Psychological Health

Numerous studies have been conducted that examine the effects of writing about emotional life experiences over a period of time. These studies show that written disclosure of traumatic life events has a substantial impact on physical health and suggest a similar impact on psychological well-being (Smyth, 1998). The writing procedure commonly used in these studies was developed from research investigating the nature of inhibition, (Pennebaker, 1985), a well-recognized stressor. This early research found that when individuals openly expressed events in their lives the negative physiological effects of inhibition were attenuated (Pennebaker, 1985). The resulting research demonstrated a prodigious amount of support for the positive effects of disclosure on general well-being. The standard writing paradigm that emerged from this research allows individuals to write about emotionally important issues and the impact that these issues have on their lives. For a period of days, individuals record descriptions of these issues, as well as thoughts and feelings associated with events surrounding these issues. The writing does not last long, normally a quarter of an hour for less than a week. However, the results are impressive. A recent meta-analysis showed that across 13 studies, written emotional disclosure related to increases physical well-being, physiological functioning, general functioning, and psychological well-being (Smyth, 1998).

The effects of writing on physical health. The most commonly investigated effect of written disclosure on well-being is the impact of writing on physical health outcomes. Long-term health benefits such as increased t-helper cells levels and specific antibody responses are evident in the months following the writing assignment (Esterling, L'Abate, Murray, & Pennebaker, 1999; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Petrie, Booth, Pennebaker, Davison, & Thomas, 1995). In addition, writing has also been shown to affect self-report indexes of health. Relative to controls, individuals who wrote about emotional events in their lives reported a decrease in number of physician visits anywhere from two months (Pennebaker & Francis, 1996) to 15 months (Pennebaker, Barger, & Tiebout, 1989) after writing. It is thus apparent that writing about emotionally challenging events has some impact on general physical health.

The effects of writing on psychological well-being. The evidence that writing about emotionally challenging life events has a positive impact on psychological well-being is not as firmly established as that for physical health indicators. However, a meta-analysis that includes both published and unpublished work, as well as multiple dissertations, indicates that writing does, in fact, have some impact on psychological well-being (Smyth, 1998). Overall, individuals in writing groups show an increase in psychological well-being over time. Specifically, individuals in the writing condition report being happier than those in control conditions in the weeks following writing (Pennebaker, 1997). Thus, writing about difficult life experiences does appear to have some effect on psychological well-being, but the research supporting this finding is still in need of development. A major goal of the current

study is to gain a greater understanding of the effects of writing on well-being by examining its effects within the theoretical framework of narrative identity.

Writing About Emotionally Challenging Events as Narrative Reconstruction of Identity

According to McAdams (1996), narrative identity development involves constructing a self-defining life story that coherently integrates one's understanding of the past, present and future, as well as providing a subjective sense of worth, meaning, and purpose in life. Individuals begin forming the life story as individual identity develops in early adolescence (McAdams, 1996). This period is critical for the development of a healthy identity narrative. McAdams identifies various narrative qualities that are indicators of a "good" life narrative, or one that is indicative of positive psychological development and a health identity structure (McAdams, 1996). Two of these indicators of a healthy life story are narrative coherence and narrative openness. A coherent narrative makes sense and communicates significant information about the self in a meaningful and integrated manner. Creating such a narrative is one of the essential tasks of constructing the life narrative during adolescence and young adulthood (Habermas & Bluck, 2000; McAdams, 1996). Only when the many aspects of a person are integrated into a clear and meaningful whole can a healthy identity can be fully realized. Narrative openness refers to being open to change in the life story and "propels the person into the future by holding open a number of different alternatives for future action and thought" (McAdams, 1996, p. 315). Consistent with this theory, recent research has shown that narrating a complex life story with coherence and openness predicts a range of positive psychological

outcomes in adulthood (Baerger & McAdams, 1999; King, Scollon, Ramsey, & Williams, 2000; Pals, 2000).

One of the strengths of the life story approach to identity is its ability to show how identity is continually developed, refined, and changed in response to events as they occur in an individual's life. The manner in which specific events are incorporated into the life narrative may be very indicative of aspects of the identity of the narrator. Emotionally challenging life events may present a distinct obstacle to the ability of the individual to create a positive, healthy identity narrative (Pals, 2000) and, in particular, one that is coherent and open to change. Indeed, events such as divorce, academic failure, and serious illness often are so difficult because they undermine the assumptions that form the basis for a coherent understanding of self. The major threat such events pose to the self may often initially be met with resistance and inhibition rather than openness to how the event might change identity and re-direct the life story in a positive direction.

If challenging emotional events are so threatening to the construction of a coherent and open identity narrative, how do people deal with this threat and maintain well-being? According to Pennebaker and Keough (1999), the process of writing about emotionally challenging events may be beneficial. They argue that disclosing difficult life experiences through writing may facilitate the rebuilding and reestablishment of the self after a traumatic event. The further suggest the narrative reconstruction of identity accounts for the positive effects of writing on physical and psychological health. According to their perspective, when individuals have a traumatic experience, the event is often very threatening to the self. This threat then

causes the individual to inhibit cognitions about the event. Inhibition further threatens the development of the self and increases stress, thus allowing for poor psychological and physical health. This theory proposes that the written processing of the difficult life event allows individuals to "to place the experience into a meaningful framework, feel greater personal coherence, enjoy heightened self-esteem, experience a heightened sense of control over the events, and experience increased optimism" (p. 110, Pennebaker & Keough, 1999). This quote expresses a key link between written disclosure and McAdams' (1996) identity narrative framework. As the individual writes about a traumatic event, the experience is actively examined and explored, thus decreasing inhibited cognition about the event and increasing openness to new ways of thinking and change. Through this exploration the individual is then able to gain a greater sense of personal coherence as the event becomes integrated into the identity-defining life narrative. In short, the process of openly and coherently reconstructing identity in response to the event should create the positive health benefits seen from written disclosure of traumatic life events.

Consistent with the theoretical framework described above, the first main hypothesis investigated in the current study is that writing about an emotionally challenging event, in contrast to not writing, should allow for the analysis of the event and the integration of the event into the life story. In turn, the writing process should lead to increased well-being as the self becomes more integrated and reconstructed in response to the event. This study will examine physical well-being as a replication of previous research, while maintaining a more central focus on understanding the less established relationship between writing and psychological well-being. First,

traditional subjective well-being is examined over time in relation to writing with

positive and negative affect (Watson, Clark, & Tellegen, 1988) as well as satisfaction

with life (Diener, Emmons, Larsen, & Griffin, 1985). Second, an important

contribution of the current study is the several well-being measures included that

specifically highlight the connection between identity and well-being established by

the theoretical framework described above. These include Ryff's (1989) well-being

scales of self-acceptance, personal growth, and purpose in life as well as Campbell's

(Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996) measure of self-

concept clarity, a measure of special import, given the identity issues of the college

age group in the current study.

Individual Differences within the Writing Process: Transformational Processing

The second main question of this study concerns the individual differences

that emerge within the process of writing about emotionally challenging events. It is

expected that while writing may demonstrate a main effect, as described above, it also

may be the case that certain individuals may display characteristics within the writing

that serve as mechanisms for the narrative reconstruction of identity and the

enhancement of well-being. Specifically, the current research examines both thematic

and linguistic transformational processing within narratives of emotionally

challenging life events. The process of coming to view the self as having positively

grown and attained positive insight into the self should relate to increased well-being.

Previous research examining individual differences within both the life narrative and

writing literatures (e.g. Pals, 2000; Pennebaker, 1993) suggests that this

transformational process of expressing a sense of positive change in reaction to a

challenging event has a strong positive impact on healthy psychological functioning.

The theme of positive self-transformation. Within narrative research, the

process of transformation has been thematically represented as positive self-

transformation (PST, Pals, 2000; 2002). Pals (2000) found that women who

emphasized the theme of PST within narratives of difficult life events showed the

best overall pattern of psychological and physical health in midlife (Pals, 2000). PST

was conceptualized as one quadrant of the interaction of two orthogonal narrative

dimensions, openness and coherent resolution (Pals, 2000), two key factors of a

"good" life narrative (McAdams, 1996). In this conceptualization, openness refers to

the level of emotional acknowledgment and willingingness to analyze and embrace

the impact of the life event on the self. Individuals who are open are willing to

confront the negativity of a difficult life event and explore the meaning of their

emotions in reaction to such an event. Such individuals show higher levels of

maturity than those who are more closed in their approach to difficult life events

(Pals, 2000). Coherent resolution relates to the extent to which an individual is "able

to move on from the difficult life experience and construct a positive identity" (Pals,

2000, p. 39). Individuals who show this pattern express an understanding and

positivity towards the event that has negatively impacted their lives. These

individuals show higher levels of subjective well-being, more positive affect, and

increased ego-resiliency. While these two dimensions are positive in and of

themselves, the ability to express both is critical to the healthy integration of

emotionally challenging events into narrative identity. Thus, it is expected that when

individuals can both examine and be open to the impact an emotionally challenging

event and come to a positive understanding of that event through seeing the self as positively transformed they strengthen, clarify and deepen identity and are thus able to experience the a great degree of overall well-being.

Transformational processes akin to PST have been demonstrated elsewhere. Research on parents of children with Down's Syndrome show that when parents accommodated to the idea of having a disabled child and at the same time showed closure towards the difficulty of having a disabled child they were more likely to show higher levels of self-reported stress-related growth (King et al., 2000), a concept that is theoretically similar to PST. In addition, redemptive narrative sequences involving positive change after negative events have been shown to be predictive of subjective well-being (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001).

Linguistic indicators of transformational processing. The writing literature takes a linguistic rather than thematic approach to understanding individual differences in narrative processing of emotional events. The Linguistic Inquiry and Word Count (LIWC, Francis & Pennebaker, 1992) computer program analyzes text for word use proportions. Specific patterns of word use can identify people who are most benefited by the writing process. As individuals write about their experiences over time, an increase in cognitive and insight words often appears within the writing that is indicative of better health outcomes (Pennebaker, 1993; Pennebaker & Francis, 1996). The use of increasing proportions of cognitive and insight words is suggestive of exploration of the event with a desire to make meaning of the event. A second pattern of word usage integrating affective qualities of writing, such as high levels of positive emotion words and moderate negative emotion words, with the

aforementioned cognitive qualities is also indicative of greater physical health. (Pennebaker, 1993; Pennebaker & Francis, 1996). This pattern theoretically maps onto PST. Insight and causation words are defined as "self-reflection and the search for understanding about the nature of an experience or one's self" (Pennebaker & Francis, 1996, p.611) and "a cognitive process reflecting the search for causes or reasons" (Pennebaker & Francis, 1996, p.611), respectively, indicative of the open exploration shown in PST. Moderate levels of negative words also show openness to emotions in acknowledging the negativity of the event in question, without becoming absorbed in the negativity. High levels of positive emotion are indicative of the positive resolution characteristic of PST. For example, if an individual were to write: "Although the event was very sad and difficult to deal with, ultimately, it was dealing with this event that caused me to discover greater strengths within myself than I ever knew were out there. I am very proud of myself for that", it would be indicative of not only positive self-transformation in a thematic sense, but also be demonstrative of transformation on a linguistic level. One aspect of this study is to show that this affective-cognitive linguistic pattern relates to the theme of PST.

Transformational processing and well-being. Consistent with previous research, it is expected that individuals who display transformational processing within their writing will have higher levels of well-being. This hypothesis will be examined in two ways. First, it is expected that the transformational processing variables will be correlated with time two well-being. Secondly, the presence of a PST theme with narratives of emotionally challenging life events should uniquely predict change in well-being from time one to time two. Again, these pattern should

be most prominent for those indicators of well-being that specifically focus on the process of identity maturation such as self-acceptance, purpose in life, personal growth (Ryff, 1989), and self-concept clarity (Campbell et al., 1996).

Personality and transformational processing. While writing may generally facilitate transformational processing, some individuals may be predisposed to engage in more transformational processing when they write about emotional events. Building on previous research (Pals, 2000), transformational processing is expected to relate to the personality traits of openness and neuroticism. As openness represents an individual's propensity to explore and be open to new experiences (McCrae & Costa, 1999), such individuals should be more likely to be open to exploring the emotional issues of their lives. In turn, individuals who are low on neuroticism can be characterized by higher levels of positive affect and lower levels of anxiety (McCrae & Costa, 1999). Such individuals should have a greater propensity to positively interpret negative emotional events in their lives. Thus, the personality traits of openness and neuroticism seem to parallel the two-dimensional background of PST and the word use patterns seen in transformational processes within LIWC analysis. Previous research corroborates this hypothesis with transformation relating to emotional openness and ego-resiliency (Pals, 2000), personality measures similar to the personality traits of openness and low neuroticism, respectively. The other traits of the five factor model (agreeableness, conscientiousness, and extroversion) will also be examined for their relation, if any, to transformational processing. This angle is purely exploratory, as it has not been previously researched.

Summary

This study examines the effects of writing narratives of emotionally challenging life experiences over four days on patterns of well-being by examining well-being in the experimental writing group and the non-writing control group three weeks after the writing process. In addition, it explores transformational processes within narratives of emotionally challenging events and their unique relation to well-being. To reiterate, the questions being examined in this study are:

(1) Does writing about emotionally challenging events benefit physical and psychological health?

(2) How is transformational processing on the thematic level of PST related to transformational processing on the linguistic level of word use patterns?

(3) Do transformational processing variables relate to greater time two well-being?

(4) Does PST uniquely predict change in well-being from time one to time two?

(5) Are openness and neuroticism related to transformational processing and how do other factors of personality relate to transformational processing?

CHAPTER I

METHOD

Participants

99 participants the Introductory Psychology research pool at the College of

William and Mary participated in the current study. Participants were randomly

assigned to the writing (n = 51) or non-writing group (n = 48). The writing group

contained 37 women and 14 men with a mean age of 19.00 (SD = .16). The non-

writing control group contained 31 women and 17 men with a mean age of 18.88 (SD

= .14). All participants received class credit for their participation.

Measurement and Coding of Transitional Processing Variables with Narratives

Participants in the writing condition wrote for four consecutive days in

response to the following probe: "For the next four days, I would like for you to write

about your very deepest thoughts and feelings about an extremely important

emotional issue that has affected you and your life. In your writing, I'd like you to

really let go and explore your very deepest emotions and thoughts. You might tie

your topic to your relationships with others, including your parents, lovers, friends, or

relatives, to your past, your present, or your future, or to who you have been, who you

would like to be, or who you are now. You may write about the same general issues

or experiences on all days of writing or on different topics each day. All of your

writing will be completely confidential. Don't worry about spelling, sentence

structure, or grammar. The only rule is that once you begin writing, continue to do so

until your time is up" (Pennebaker, 1997).

Four judges independently coded each written narrative from each day for positive self-transformation. Appendix A contains the full coding instructions given to the judges. Two other dimensions were coded for but were excluded from the current analysis, as they were beyond the scope of the current research. Two additional dimensions were excluded due to low reliability.

Positive Self-Transformation. Positive self-transformation was defined as the degree to which a person emphasized how he or she had been positively transformed in some way by the emotional events and experiences being analyzed within the writing task. Any impact discussed within the writing task, as subjective as a changing sense of self or as concrete as a choice on education, was viewed as positively transforming if it was understood by the narrator as resulting from the events discussed and leading to a lasting and significant positive change in the self and/or the person's life. A narrative received a 5 on PST if PST was a well-developed theme within the narrative and was very important to the narrator's current self-concept. A narrative receiving a 1 showed no evidence for PST. Moderate levels of PST ranged from demonstrating little explicit PST (rating of 2) to having a substantial portion of PST within the narrative while keeping it distant from the central theme (rating of 4). Full examples for both high, medium, and low PST narratives can be found in Appendix B. Mean PST scores were computed across coders and averaged across the four days to generate the final overall PST variable used in analysis. Alpha reliability and means for positive self-transformation on each day and overall can be found on Table 1. Bivariate correlations between the judges ranged from .34 - .82.

LIWC. In addition to the thematic content analysis above, the writing was analyzed using the LIWC program (Francis & Pennebaker, 1992). LIWC analyzes a writing sample by examining the number of times certain words in a preset dictionary occur and creates a score for each writing sample that indicates the ratio of words of that category to total words in the writing sample. These scores are then used to assess the content of the writing as it relates to other factors of interest (Francis & Pennebaker, 1992). The narratives in the current study were assessed for word count as well as for words indicating positive emotion (e.g. happy, pretty, good), negative emotion (e.g. hate, worthless, enemy), insight (e.g. think, know, consider), and causation (e.g. because, effect, hence). Narratives received a word proportion score on each of these variables for each day. These scores were averaged and standardized across the days to create an overall positive emotion, negative emotion, causation, and insight score for each participant. Additional scores were calculated to create an overall affective-cognitive processing variable. Affective-cognitive processing is a composite score where a high value was indicative of high positive emotion, moderate negative emotion, increasing insight words, and increasing causal words over the four day period. In order to measure moderate negative emotion across the days, the overall negative emotion score was standardized and the absolute value of this score computed and reversed so that a high score of 0 would indicate moderate levels of negative emotion and thus was parallel to the scales of measure for other variables. Change scores were computed for both insight and causation based on linear orthogonal polynomials. Based on previous research assessing change in LIWC variables, the following algorithm was used: (Day4 x 3) + (Day 3 x 1) – (Day 2 x 1) –

(Day 1 x 3). All change scores were then standardized for use in analysis, again, as per previous research (Pennebaker, Mayne, & Francis, 1997). Descriptive statistics for these variables on each day and overall can be found on Table 2.

Personality Measures.

All personality measures were assessed once during the mass testing period. Alpha reliabilities and means for all measures in mass testing can be found on Table 3. Additional personality measures of repression, rumination, and reflection were initially assessed in the mass testing but were omitted from analysis, as they fell outside the theoretical scope of the study and had questionable patterns of relationships with other variables.

Personality traits. The Big Five Inventory (Appendix C) is a self-report questionnaire that assesses the traits of the Five Factor Model trait model of personality (John & Srivastava, 1999). These five factors include openness to experience, extroversion, neuroticism, agreeableness, and contentiousness. Individuals use a 5-point scale to rate the extent to which each of forty-four brief statements is self-descriptive (1 = disagree strongly, 3 = neither agree nor disagree, 5 = agree strongly). Scores on each item were averaged to compute the score for the dimension. Example items for each scale include: "Is curious about many different things" (Openness), "Is outgoing, sociable" (Extroversion), "Gets nervous easily" (Neuroticism), "Is considerate and kind to almost everyone" (Agreeableness), and "Is a reliable worker" (Contentiousness).

Emotional and Physical Well-being Measures.

All of the following materials were completed twice, once in the opening

session, prior to the writing manipulation and once in the closing session, three weeks after the writing manipulation. All measures were counterbalanced within a questionnaire packet to control for ordering effects. The cover page for this packet gave instructions for completion of the packet (Appendix D). The alpha reliabilities and means of all time one measures are presented on Table 4. The alpha reliabilities and means of all time two measures are presented on Table 5.

Physical well-being. Physical well-being was assessed with a single item self-report question of overall health: "How would you rate your overall physical health on a scale of 1-7?" with 1 being very poor and 7 being very good.

Subjective well-being. The following measures assess various facets of subjective well-being. One additional measure of well-being, that of the subjective experience of flow, was assessed during the two sessions but was excluded from analysis due to low reliability (alpha = .66) and peripheral connection to the central hypotheses tested in the current study. The flow measure was adapted for a previous study by the researchers and has yet to be validated. It was withheld from the analysis it is unclear at this time whether the measure is actually assessing the flow experience. All scores of subjective well-being were calculated by averaging the items in the questionnaire to formulate an overall score.

PANAS. The Positive Affect Negative Affect Scale (PANAS, Watson et al., 1988, Appendix E) is a list of twenty words assessing both positive and negative affect. Ten words specifically assess positive affectivity (e.g. "interested, excited, strong") and ten words specifically assess negative affectivity (e.g. "irritable, ashamed, nervous"). Each word is rated on a five-point scale of the extent to which it

has been felt in the past few weeks.

Satisfaction with life scale. The Satisfaction With Life Scale (SWLS, Diener et al., 1985, Appendix F) is concerned with the degree to which an individual is comfortable and happy with his or her life. With statements such as, "The conditions of my life are excellent", participants rate their satisfaction with their lives on a seven-point scale from strongly disagree to strongly agree on five statements.

Self-concept clarity. Self-concept clarity (SCC, Campbell et al., 1996, Appendix G) is the sense of having a clear understanding of one's self and identity. Individuals rate themselves on twelve statements that assess this fact (e.g. "In general, I have a clear sense of who I am and what I am") on a scale of strongly disagree (1) to strongly agree (5).

Ryff's components of subjective well-being. Three facets of subjective well-being were assessed with a subset of the subjective well-being scale developed by Ryff (1989). Specifically, the three factors of purpose in life ("I have a sense of direction and purpose in life"), personal growth ("I enjoy seeing how my views have changed and matured over the year"), and self-acceptance ("When I look at the story of my life, I am pleased with how things have turned out"), were assessed (Appendix H). All questions are rated on a six-point scale and each facet contains 14 questions for a total of 42 questions.

Procedure

Writing assessment group. When all participants arrived, the research study was introduced per the verbatim script, version A (Appendix I). Emphasis was placed on the fact that they may feel distress at times while writing, that this is normal, and

that if they felt they were overly stressed they may terminate their participation at any time without consequence. In addition, they were reminded that they have access to the counseling services provided by the college. The further requirements for the research were explained and consent forms (Appendix J) were handed out and collected when the group had finished with their consent forms. Participants then completed a battery of questionnaires compiled into a packet. Each packet included a cover page with general instructions for completion of the packet (Appendix D) and a demographics questionnaire (Appendix K). Order of presentation within the questionnaires was counter-balanced to control for ordering effects. Participants completed the materials and all materials were collected upon group completion. Participants then received four envelopes and were instructed that they were to begin writing on the following Monday and that each day they were to turn in their writing from the day before, during set hours. They were reminded that their writing was strictly confidential and that they were able request to have their writing returned to them at the end of the study (see the verbatim script, Appendix J). As they left, they were given a handout containing the primary researcher's contact information and the contact information for counseling services.

Three weeks after the termination of writing, participants returned to complete a battery of questionnaires identical to the questionnaire packet from the opening session. At the end of the half-hour, the participants were debriefed per the verbatim script, version A (Appendix J). Any students indicating interest in the findings of the research put their email address on a sheet separate from all other material and informed they would receive a summary of the findings by email at the end of the

Spring 2003 semester.

Non-writing control group. When all participants arrived, the research study was introduced per the verbatim script, version B (Appendix J). After signing consent forms (Appendix J), participants completed a battery of questionnaires complied into a packet. Each packet included a cover page with general instructions for completion of the packet (Appendix D) and a demographics questionnaire (Appendix E). Order of presentation within the questionnaires was counter-balanced to control for ordering effects. Participants completed the materials and all materials were collected upon group completion.

Three weeks after the termination of writing in the writing group, participants returned to complete time-two questionnaires; these packets were exactly the same as the questionnaire packet from the opening session. At the end of the half-hour, the participants were debriefed per the verbatim script, version B (Appendix J). Any students indicating interest in the findings of the research put their email address on a sheet separate from all other material and informed they would receive a summary of the findings by email at the end of the Spring 2003 semester.

CHAPTER II

RESULTS

Does writing about emotionally challenging issues have benefits for physical and

psychological health?

The first hypothesis examined whether the process of writing about

emotionally important life issues over a period of four days would be related to

increased well-being three weeks after writing. This hypothesis was tested with

multivariate repeated measures ANOVAs. Support for this hypothesis would be

shown with significant interactions between writing group (between-subjects factor)

and time (within-subjects factor). As demonstrated in Table 6, the hypothesis was not

supported. None of the interactions were significant, with F scores ranging from .00

to 2.62.

How are transformational processing variables on the thematic level of PST related

to word use on the linguistic level?

The second hypothesis examined the interconnections of the various measures

theoretically associated with the expression of transformation within emotional

narratives. While the main relationship of interest was the relation between PST and

the affective-cognitive processing composite, it was expected that all of the measures

(positive self transformation, positive emotion words, moderate levels of negative

emotion words, insight words, increasing insight words, causation words, increasing

causation words, and the affective-cognitive composite) would be highly

intercorrelated. As shown in Table 7, the hypothesis was supported, as the LIWC variables were generally correlated and positive self-transformation was marginally positively correlated to positive emotion word use and highly positively correlated with the affect-cognitive composite LIWC variable.

Do transformational processing variables relate to greater time two well-being?

The transformational process variables were expected to be highly correlated with time two well-being scores. This relation was expected to be most robust in relation to the measures of identity functioning of personal growth, purpose in life, self-acceptance, and self-concept clarity. As shown in Table 8, this hypothesis was well supported, with PST positively correlating with all five of these variables, as well as satisfaction with life, and negatively correlating with negative affect. Similarly, the affective-cognitive composite positively correlated with personal growth and marginally positively correlated with purpose in life. While the affective processes did not show this pattern, the cognitive processes did relate to time two well-being, with mean insight positively correlating with all five identity functioning variables and satisfaction with life to some extent, while increases in causation positively correlated with personal growth and negatively correlated with negative affect.

Does PST uniquely predict change in well-being from time one to time two?

This question examined whether positive self-transformation within narratives of emotionally challenging events would predict time two well-being above and beyond the effects of time one well-being. It was expected that this would, in fact, be the case, especially for the measures of identity functioning of personal growth,

purpose in life, self-acceptance, and self-concept clarity. As can be seen in Table 9, time one well-being was highly predictive of well-being at time two, leaving little unaccounted for variance left to predict. However, positive self-transformation showed a trend in the prediction of physical health and self-concept clarity.

Are openness and neuroticism related to transformational processing and how do other factors of personality relate to transformational processing?

The final question examined the relation of the transformational processing variables to various measures of personality traits. Specifically, it was expected that the theme of PST would be positively related to openness while being negatively related to neuroticism. The relations with the linguistic indicators were more exploratory, but the same general pattern was tentatively expected. As shown in Table 10, PST was positively correlated with openness and negatively correlated with neuroticism in accordance with the hypothesis. Surprisingly, openness and neuroticism showed no significant relations with the linguistic indicators of transformation, with the exception of neuroticism correlating positively with negative affect.

In addition to the primary hypothesis, the relations between transformational processing and the three other factors of the Five Factor Model were explored. Both agreeableness and conscientiousness showed marginally significant correlations with some of the transformational process variables. Agreeableness was marginally positively correlated with both change in causation and positive self-transformation. Conscientiousness was marginally positively correlated with both change in causation and the affective-cognitive composite variable.

CHAPTER III

DISCUSSION

This study addressed five main questions. First, does writing about

emotionally challenging issues benefit physical and psychological health and, more

specifically, healthy identity construction? Second, is the theme of positive self-

transformation in written narratives about emotionally challenging events related to

linguistic indicators of affective-cognitive processing? Third, do transformational

processing variables relate to greater time two well-being? Fourth, does PST uniquely

predict change in well-being from time one to time two? And fifth, are openness and

neuroticism related to transformational processing and how do other factors of

personality relate to transformational processing? Although the hypothesis addressed

by the first question was not supported, some support was shown for the hypotheses

of the other four questions, which generally highlights the importance of

transformational processing within writing about emotionally challenging events. The

results for the examination of all five questions are discussed below.

The Effects of Writing about Emotionally Challenging Events on Well-being

It was expected that writing about emotionally challenging issues would be

related to increases in physical and psychological health over time. Contrary to

expectations, the writing group and the non-writing control groups did not show

differences on any of the measures of either physical health or psychological well-

being from time one analysis to time two analysis. There are numerous issues to be

considered with these findings that may explain why an effect of writing was not found. First, the well-being variables proved to be remarkably stable from the time one to the time two assessment (see Table 9) leaving little variation to detect from time one to time two. Second, the three-week delay between writing and the second assessment of well-being was far shorter than initially desired. Most prior research has waited between 6 weeks (Pennebaker et al., 1988) and 2 months, or more, (Pennebaker, 1997) before assessing outcome variables. However, due to department constraints beyond the control of the experimenters, the period between assessments had to be shortened from five weeks to three weeks. While no known meta-analyses (e.g. Pennebaker, 1997; Smyth, 1998) have examined the influence of the length of delay between writing and the assessment of well-being, it seems that the short delay used in the current study may have contributed to the lack of change seen over time. Future research should use a diary study format to track changes in well-being over an extended period of time to determine patterns of change in well-being after writing and examine possible delay effects.

The writing probe may also have contributed to the lack of change in well-being over time. The probe was unclear about whether individuals should write about past or ongoing emotional challenges. Smyth's meta-analysis (Smyth, 1998) suggests that greater benefits to psychological well-being are shown when the events are of current emotional concern. Due to a lack of time and resources, the current research did not rigorously examine the timeframe of the events and thus no interpretation concerning the effects of writing about a current emotional issue, rather than a past emotional issue, can be made at this point. Future research should formally address

the influence of event recency on writing by specifically requesting past emotional issues and current emotional issues from different groups and comparing the differences in writing benefits.

In addition, the specific probe to which individuals responded did not request that individuals write about emotionally *difficult* events, but rather requested that they write about an *emotional issue*. Thus, narrative valence may have had some impact on the findings of the study. This is of some concern in the assessment of individual differences of positive self-transformation, as one of the qualities of PST is a positive resolution of the challenging event. The verbatim instructions, however, did describe writing as being focused on *difficult* events. An informal assessment of the narratives appears to indicate that the verbal instructions did have an impact on narrative valence, as only 5 narratives could be considered to be about a positive emotional event. The five participants who did write one positive narrative had a wide range of overall PST scores (1.50 – 3.83). Therefore, it does not appear that emotional valence of the specific event could have had a substantial impact on the rating of PST.

Interestingly, research since the aforementioned meta-analysis (Smyth, 1998) suggests that writing can relate to positive psychological functioning if the writing is not focused on negative emotional events, as most of the writings in this study were. King (2001) found benefits to subjective well-being up to five months after writing when individuals were asked to write about life goals and best possible selves. Thus, the experience of writing about an emotionally difficult life event in general may not have positive benefits for psychological functioning. It may be that an individual can write about an emotionally challenging event without integrating the negative life

event, as it is too difficult a task. A more positive writing focus within writing about

an emotionally challenging event may be more facilitative of the integrative process

necessary for healthy identity construction and thus better psychological functioning.

It is thus necessary to examine individual differences within the writing process to

determine if a pattern of integration is necessary for the improvement of

psychological well-being. In the current study, this positive integration was

specifically represented by the idea of transformational processing.

Individual Differences in Writing about Emotionally Challenging Events in Relation

to Psychological Well-being

In the current study, the notion of positive integration described above was

specifically represented by the assessment of the extent to which indicators of

transformational processing were present in writings about emotional events in

individual lives. Transformational processing within narratives of emotionally

challenging life events was expected to improve well-being through its positive,

integrative impact on the narrative construction of identity. Transformational

processing was assessed thematically, through coding the extent to which people

described themselves as positively changed by their emotional experiences; and

linguistically, through the extent to which affective and cognitive words, suggestive

of the examination of the impact of the event, were used within the writing. As

hypothesized, individuals who thematically represented an experience as positively

transforming also demonstrated a linguistic pattern of affective-cognitive processing.

It appears that the thematic representation of transformation resulting from an

emotional challenge involves a parallel linguistic pattern that focuses on both the

positive and the negative impact of an event and expresses the integration of the event through the increasing use of words indicating the development of insights and causal connections. As only one component of the linguistic affective-cognitive composite, positive emotion words, even marginally related to PST by itself, the integration of emotional and cognitive processing at the linguistic level does appear to be related to positive identity construction and growth through its relationship with the theme of PST.

Given the positive identity development expressed in transformational processing, it was expected that the emergence of the theme of PST while writing about emotionally challenging events would predict change from time one to time two well-being. This was only shown to a marginal degree in the prediction of physical health and self-concept clarity. However, the marginal prediction of self-concept clarity is encouraging; because it may be indicative of the positive identity functioning that is developing during the transformational processing of emotionally challenging events. Of all the measures of well-being included in this study, self-concept clarity may be the most direct measure of the extent to which a person has a clear sense of identity, as it is defined as "the extent to which the contents of the individual's self-concept... are clearly stable and confidently defined, internally consistent, and temporally stable" (Campbell et al., 1996, p. 141). It is thus possible that writing in a manner that expresses PST may indeed promote development and clarification of self-understanding.

The weak predicative ability of the theme of PST inhibits our understanding of how transformational processing may facilitate change in well-being over time.

However, the indicators of transformational processing on both the thematic and linguistic level did show theoretically expected correlations to various factors of well-being assessed after the writing exercise, especially with those factors that were defined as being indicative of healthy identity functioning. Specifically, individuals who demonstrated PST in their writing about emotionally challenging events showed a trend towards being highly satisfied with life and reported low levels of negative affectivity. Such individuals also reported high levels of positive identity functioning, including feeling they have grown from their experiences, that their life has meaning and purpose, that they are happy with themselves, and confident of their identity. Thus, being able to work through an emotionally challenging event in a way that leads to feeling positively transformed does appear to be related to the healthy identity functioning so critical to adolescent development, even if it does not predict change in identity functioning over a three-week period.

The affective-cognitive linguistic indicator of transformational processing showed a similar, yet less pronounced, pattern of relations with healthy identity functioning. Specifically, individuals who demonstrated linguistic affective-cognitive processing of emotionally challenging events reported a strong sense of personal growth, as well as some degree of purpose in life. That transformational processing on both the thematic level and the linguistic level was related to these two indicators of healthy identity functioning provides further evidence for the close relationship proposed here between transformational processing within writing and healthy identity functioning. More generally, these dual relationships are also highly validating of the current measurement of transformation.

Personal growth is concerned with the degree to which an individual has experienced growth in his or her life and felt change as an individual, presenting a strong parallel with transformational processing and the sense of change experienced within an emotionally challenging event. Ryff (1989) describes and individual with personal growth as, "continually developing and becoming, rather than achieving a fixed state wherein all problems are solved" (Ryff, 1989, p. 1071) and points out that "[l]ife span theories ... give explicit emphasis to continued growth and the confronting of new challenges of tasks a different periods of life" (Ryff, 1989, p. 1071). Having a sense of personal growth is thus suggestive of identity exploration, a key component to the Eriksonian model of healthy identity development in adolescence (Erikson, 1968). The strong relation between transformation and personal growth suggests that individuals who thematically and linguistically represent emotionally challenging events in a transformative way may have achieved a healthier identity state than those who did not represent emotionally challenging events in such a way.

Purpose in life is also highly reflective of healthy identity functioning as the sense of one's life having a direction creates a sense of meaning that is intrinsically rewarding (Emmons, 2003). The relation of purpose in life to transformational processing is validating, as the explorative process of transformation may demonstrate an individual's ability to integrate the emotionally challenging event into their life story and thus achieve a more purposeful and coherent life narrative indicative of healthy identity functioning (McAdams, 1996). The relation of purpose in life and transformational processing is further validating in that it may reflect the

individual's commitment to goals and ideals, an achievement that is also indicative of healthy identity development in the Eriksonian model (Erikson, 1968).

Within the more specific linguistic indicators of transformational processing, an interesting pattern emerged wherein the indicators of cognitive processing were more highly related to general well-being and healthy identity functioning than the indicators of affective processing. The linguistic indicators of cognitive processing may be evidence that a coherent, new understanding of the self, as well as the place of life events in the self-concept, is emerging and being integrated into the life story. It appears that emotional expressivity may not be psychologically beneficial in and of itself, that instead a young adult must actively integrate and cognitively make sense of emotional experience in order to develop a strong, healthy identity.

A couple of interesting findings emerged within the correlations between the cognitive indicators and well-being outcomes. First, individuals who used a large amount of insight words (e.g., realize, discover) when writing about emotionally challenging events over time showed a pattern of healthy identity similar to that found in individuals who demonstrate PST in their writing. Such individuals reported some sense of life satisfaction, personal growth, purpose in life, and a great deal of self-acceptance and self-concept clarity. This parallel pattern is interesting given that the individuals whose narratives demonstrated PST were not necessarily the same individuals who used a high degree of insight words over the writing period. This independence suggests that the general process of gaining insight about an event may benefit one's own opinion of one's self and clarify the self for the individual, independent of any such benefits that are specifically related to PST. Second, an

increase in the use of causal words over the writing period also showed some parallels to PST, as individuals who wrote with more causal words over time reported some sense of personal growth and reported low negative affectivity. The commonalities between PST and increased use of causal words in relation to low negative affectivity are suggestive of a possible benefit to cognitively processing an event. As an individual is able to find causal purpose for an emotionally challenging event, the event may become more comprehensible and thus anxiety and general negative affectivity may be lessened.

Explorations into Personality Correlates of Transformational Processing

While the main focus of this study was to examine the effects of transformational writing on identity and well-being, it was also hypothesized that transformational processing might have personality precursors that make it more likely to occur. Consistent with previous research (Pals, 2000), it was expected that transformational processing would relate to openness and emotional stability. As predicted, PST within writing about emotionally challenging life events was related to both high openness and low neuroticism. This is not surprising given the exploration and positivity expressed by such individuals in their writing. In contrast to the thematic indicator of transformation, the linguistic indicators of transformation were, for the most part unrelated to personality traits, with the exception of the usage of a large number of negative affect words correlating positively with neuroticism. It was particularly surprising that the linguistic indicators of cognitive processing and the affective-cognitive composite were not correlated with openness, as openness to experience involves openness to feelings and ideas. It is unclear as to why thematic

transformation would show the expected relationship to personality traits while linguistic transformation would not. Future research should explore the relation of transformational processing, and word usage in general, to more specific measures of personality traits.

In addition to these findings, both agreeableness and conscientiousness seemed to be somewhat related to transformational processing. Specifically, PST positively related to agreeableness, the affective-cognitive composite positively related to conscientiousness, and the increasing use of causal words was positively related to both agreeableness and conscientiousness. The reasons behind these relationships are not as clear as other findings. However, various studies suggest that, over the life-span, individuals demonstrate mean-level increases in both of these personality traits, which suggests that this pattern may reflect the development of maturity in adulthood (McAdams, 2000). It is thus possible that, as a process that facilitates identity consolidation, transformational processing is indicative of increasing maturity among young adults and is therefore related to agreeableness and conscientiousness.

Developmental Perspectives of Transformational Processing

Is the significance of transformational processing within written narratives of emotionally challenging events unique to young adulthood? The transition from adolescence to young adulthood is a time of great stress. It is a time of identity questioning and growth (Erikson, 1968). Individuals in the current study are caught in this difficult time of trying to figure out who they are. They told stories that ranged from the death of their grandparents to relationship troubles to rape to current

thoughts of suicide. Many people would not, and could not, introspect deeply about these events, much less come to a positive view about the impact these events have had on their lives. However, the individuals who did show positive self-transformation through these events also showed higher levels of psychological well-being. They demonstrated that they felt they had grown from events in their lives, that their lives had purpose, that they were accepting of who they are, and that they understood who they were. The ability to attain such knowledge is, in fact, critical to the process of identity development in adolescence and young adulthood (Erikson, 1968). By being able to integrate such events into their narrative identity, they are beginning to develop a "good" narrative (McAdams, 1996).

Marcia (1987) conceptualizes four stages of identity processing that may be met in adolescence and young adulthood, based on two orthogonal dimensions similar to those that have been described as the underlying dimensions of PST (Pals, 2000). Exploration involves the examination of the self and the questioning of whom one is, thus moving away from childhood and towards one's adult self. This process should end in commitment to the thoughts developed in this period of exploration. Such individuals are said to have *achieved* identity statuses. In contrast, individuals who are still exploring are in *moratorium*. Individuals who commit to some pattern without exploration are said to be *foreclosed*. Finally, individuals who have neither explored nor resolved their identity are said to be *diffused*. Individuals who have an achieved identity status also report higher levels of psychological well-being (Helson, Stewart, & Ostrove, 1995). The achieved identity status closely parallels the writing of individuals who exhibit transformation in their writing. These individuals show

exploration and questioning by examining the meaning and impact of emotional events in their lives. This process contributes to a committed identity when they come to see themselves as positively transformed in some way by the event, whether it is in the form of new beliefs and values, greater self-confidence, or the discovery of new talents and abilities. This pattern is demonstrated not only in the exploration and commitment to new ways of seeing the self within PST narratives, but also in how PST was related to personality traits in the current study. Openness to experience closely parallels exploration, and emotional stability has been associated with commitment to a coherent and positive identity (Pals, 1999). It is important to note that the potential benefits of transformational processes for narrative identity does not seem to be isolated to young adulthood. For example, Pals (2000) found that women who showed transformation processes when writing about difficult life events that occurred between 20 and 54 years of age reported higher levels of subjective well-being and observer rated maturity than women who did not show transformation patterns in their narratives. Similarly, research on parents of children with Down's syndrome shows that parents who show similar transformational patterns have higher levels of stress-related growth than those who do not show such processes (King et al., 2000). In addition, this finding may generalize across contexts, as individuals who both explore and come to a positive resolution about their spiritual beliefs show higher levels of personal growth and the intrinsically rewarding experience of flow than those who do not show this pattern (Smith & Pals, 2003).

While less stage oriented in its developmental perspective, the process of becoming a fully functioning person (Rogers, 1947) may relate to transformational

processing. Rogers suggests that individuals live in a phenomenal field, their personal, subjective understanding of their experiences. Rogers' conceptualization of the phenomenal field bears remarkable parallels to McAdams' view of the narrative identity. McAdams suggests that the manner in which an individual tells a story is not reflective of the actual events as they occurred but more reflective of how the individual views an event and the meaning it has (McAdams, 1996). Similarly, Rogers (1947) suggests that individuals experience reality and are motivated to act based on the manner in which they perceive themselves and the world around them. Both Rogers and McAdams suggest that other individuals may understand another individual based on his or her representation of personal experiences, with McAdams (1996) referring to the narrative and Rogers (1947) highlighting client-centered therapy.

Rogers suggests that within the phenomenal field many individuals set conditions of worth for themselves based on previous experience and the expectations of others. Conditions of worth are standards by which and individual judges his or her behavior. When an individual acts in a manner that is contrary to one of their conditions of worth anxiety and conflict arises, as such individuals often repress events that conflict with conditions of worth. As conditions of worth are an important part of an individuals phenomenal field and thus of their own identity, when an event threatens a condition of worth it can be very traumatic in its threat to self. However, the fully functioning person is able to go beyond conditions of worth to view all experience as growth promoting. This reflective individual is aware of the impact of events, whether positive or negative, and is able to integrate them coherently into his

or her phenomenal field, a process theoretically similar to transformational processing (Rogers, 1947). Future research should explore the connections between the fully functioning person and the propensity for transformational processing.

Limitations and Future Directions

Some limitations, such as time constraints beyond the control of the experimenters, have already been discussed. Future research should attempt to examine the effects of writing about emotionally challenging life events on various measures of psychological functioning over a longer period of time. Other limitations than time exist within this study. First, while the transformation process was addressed on a correlational level, causation can not be inferred from such a design. Indeed, the relative inability of PST to predict change from time one to time two, along with its correlations to openness and neuroticism prior to the writing, suggest that perhaps the individual differences in identity that drove the relations between transformational processes and well-being were already in place prior to the writing exercise. In future research, the process of transformation can be more directly explored by directing participants to engage in exploration and searching for positive outcomes as they write, thus guiding transformational processing. If this is indeed a critical component to identity formation, then individuals who engage in more directed transformational processing should show the positive psychological benefits shown in this study by individuals who spontaneously engaged in such processes.

Similarly, all measures of well-being were self-report measures, thus limiting the validity of these measures. Future research should investigate the impact of transformational processing on a broader range of well-being measures. Much of the

previous research on the effects of writing has focused on specific physiological

measures (e.g. Pennebaker et al., 1988); such procedures should be used in future

research. In addition, ratings by clinically trained observers or by ratings performed

by individuals close to the participant of psychological well-being would enhance the

validity of the current findings. The investigation of transformational processing

would also benefit from investigating patterns of change in transformational

processing within individuals over a long period of time. If transformational

processing is an indicator of maturation, increases in transformational processing

should be seen in life narratives as individuals develop their identity and exhibit a

greater degree of maturation.

Future research should also consider coding the events described for the

degree of severity, as well as looking at event change over the writing days. As it was

generally suggested in the literature on writing that the specific event was not

important for the effects of writing to be seen (Pennebaker, 1997), it was decided that

coding the type of event discussed was beyond the resources of the project with

constraints on time and available research assistants. These factors should be

considered in future research examining the role of transformational processing to

ensure they do not confound the transformational process effects.

Finally, participants in this study were college students from mostly middle to

upper class homes. While some research has shown similar findings in other age

groups (e.g. Pals, 2000), socioeconomic status, education, and cultural upbringing has

remained relatively uniform. Future research should broaden the investigation of

transformation processes to a wider range of age groups and cultures. It is possible

that in more collectivistic cultures, the drive to find individual identity is not as important to psychological functioning and thus transformational processes may not be as important in these cultures.

Conclusion

It thus appears that, although writing about emotionally challenging events in general may not have benefits for psychological functioning, there are important individual differences within the writing process that may have significant implications for identity and well-being. Transformational processes within narratives were highly related to positive identity functioning. As adolescence and young adulthood are times of identity exploration and development, the integration of emotionally challenging events into the identity-defining life story in the form of positive self-transformation may serve as a buffer against negativity and promote positive functioning. Difficult events cannot be avoided, but they can be dealt with in a positive and constructive manner so that the individual can not only remain stable but also better the self as a whole.

Table 1

Alpha Reliabilities and Means for Positive Self-Transformation

	Alpha	Mean	Standard deviation
Day 1	.90	1.83	1.01
Day 2	.89	1.99	.99
Day 3	.90	2.05	1.13
Day 4	.84	2.09	1.00
Overall	.93	1.99	.86

Table 2

Means and standard deviations for LIWC Variables

	Day 1 Mean (SD)	Day 2 Mean (SD)	Day 3 Mean (SD)	Day 4 Mean (SD)	Overall Mean (SD)
Word Count	444.73 (192.43)	400.35 (155.67)	402.98 (166.27)	361.04 (157.88)	402.27 (149.75)
Positive emotions	2.46 (1.25)	2.20 (1.17)	2.57 (1.47)	2.65 (1.17)	2.47 (.82)
Negative emotions	2.41 (1.07)	2.31 (1.04)	2.45 (1.19)	2.44 (1.06)	2.40 (.58)
Causation	1.35 (.67)	1.32 (.78)	1.37 (.83)	1.35 (.93)	1.35 (.51)
Insight	2.86 (1.04)	2.86 (1.27)	2.73 (1.15)	2.91 (1.18)	2.84 (.74)
Increase in Causation	----	----	----	----	.03 (3.58)
Increase in Insight	----	----	----	----	.01 (4.35)
Moderate negative emotion	----	----	----	----	-.82 (.56)
Affective-cognitive composite	----	----	----	----	-.20 (.47)

Table 3

Alpha Reliabilities and Means for Mass Testing Personality Measures

	Alpha	Mean	Standard deviation
Big Five Traits			
Extroversion	.90	3.26	.88
Agreeableness	.84	3.85	.64
Conscientiousness	.85	3.74	.67
Neuroticism	.84	2.85	.72
Openness	.79	3.60	.57

Table 4

Alpha Reliabilities and Means for Time One Well-Being Measures

	Alpha	Mean	Standard deviation
Physical health	----	6.16	.90
PANAS			
Positive affect	.86	3.56	.86
Negative affect	.80	2.11	.67
SWLS	.91	5.06	1.46
SCC	.88	3.26	.78
Subjective well-being			
Purpose in life	.90	4.84	.68
Personal growth	.82	5.13	.50
Self-acceptance	.93	4.68	.98

Table 5

Alpha Reliabilities and Means for Time Two Well-Being Measures

	Alpha	Mean	Standard deviation
Physical well-being	----	6.18	.95
Subjective well-being			
Purpose in life	.91	4.78	.73
Personal growth	.99	5.08	.61
Self-acceptance	.95	4.69	1.03
PANAS			
Positive affect	.89	3.59	.89
Negative affect	.86	2.13	.71
SWLS	.66	5.15	1.42
SCC	.90	3.35	.79

Table 6

Means and standard deviations for writing and non-writing groups on well-being.

Well-being measure	Writing		Non-writing	
	Time 1 Mean (SD)	Time 2 Mean (SD)	Time 1 Mean (SD)	Time 2 Mean (SD)
Physical health	6.16 (.90)	6.18 (.95)	6.00 (.88)	5.96 (.87)
PANAS				
Positive affect	3.56 (.65)	3.59 (.72)	3.60 (.63)	3.51 (.76)
Negative affect	2.11 (.67)	2.13 (.71)	2.15 (.53)	2.15 (.66)
SWLS	5.06 (1.46)	5.15 (1.42)	5.18 (1.28)	5.33 (1.13)
SCC	3.26 (.78)	3.35 (.79)	3.45 (.80)	3.47 (.86)
Subjective well-being				
Purpose in life	4.85 (.68)	4.78 (.73)	4.82 (.83)	4.78 (.78)
Personal growth	5.13 (.50)	5.08 (.61)	4.97 (.54)	5.01 (.56)
Self-acceptance	4.68 (.98)	4.69 (1.03)	4.66 (.77)	4.72 (.79)

Table 7

Intercorrelations of Transformational Processing Variables

	2	3	4	5	6	7	8	9
1: PST	.35**	.23[+]	-.08	.18	.20	.10	.02	.22
2: Affective-cognitive composite		.54***	-.07	.23[+]	.47***	.53***	.13	.66***
Affective processing								
3: Positive emotion			.07	-.04	.39**	-.08	.25[+]	.10
4: Negative emotion				-.07	.02	-.26[+]	.22	.10
5: Moderate negative					.09	-.10	-.09	.10
Cognitive processing								
6: Mean insight						.03	.60***	.39**
7: Increase in insight							-.20	.13
8: Mean causation								.23[+]
9: Increase in causation								

Note. N = 51.

***$p < .001$; ** $p < .01$; * $p < .05$; [+] $p < .10$.

Table 8

Correlations of Transformational Process Variables and Time Two Well-being

	PHYS	PA	NA	SWL	PG	PIL	SA	SCC
PST	.22	.20	-.28*	.27$^+$	.40**	.35**	.39**	.27*
Affective-cognitive composite	.20	.03	-.17	-.02	.30*	.25$^+$	.15	.13
Affective processes								
Positive emotion	.15	-.01	.00	.05	.13	.14	.10	.13
Negative emotion	.03	-.17	.05	-.13	-.13	-.07	-.11	-.07
Moderate negative	-.12	.00	.12	-.13	.12	.10	-.03	-.05
Cognitive processes								
Mean Insight	.05	-.04	-.22	.24$^+$	.24$^+$	.26$^+$	.31*	.36**
Increase in insight	.08	.11	-.09	-.03	.13	.08	.01	-.04
Mean causation	.15	-.07	-.16	.14	.15	.21	.16	.21
Increase in causation	.21	-.04	-.30*	.01	.24$^+$	.20	.19	.18

Note. N = 51. Physical health (PHYS), positive affect (PA), negative affect (NA), satisfaction with life (SWL), personal growth (PG), purpose in life (PIL), self-acceptance (SA), self-concept clarity (SCC).

** $p < .01$; * $p < .05$; $^+ p < .10$.

Table 9

Regressions Predicting Time Two Well-being by Positive Self-transformation

	Time one well-being	PST
Physical health	.81***	.14[+]
Positive affect	.76***	-.06
Negative affect	.66***	-.12
Satisfaction with life	.92***	-.03
Personal growth	.90***	.02
Purpose in life	.89***	.09
Self-acceptance	.92***	.05
Self-concept clarity	.86***	.12[+]

Note. N = 50. Coefficients are standardized betas from regression analyses.

[+]$p < .10$.

Table 10

Correlations of Transformation Processing Variables with Personality Trait

Variables

	O	N	E	A	C
PST	.30*	-.42**	.09	.27[+]	.08
Affective-cognitive composite	.01	-.17	-.03	.23	.24[+]
Affective processing					
Positive emotion	.12	-.18	.06	-.03	.18
Negative emotion	-.15	.39**	.05	-.22	-.09
Moderate negative	.20	-.05	.09	.06	-.16
Cognitive processing					
Mean insight	-.07	-.14	-.23	.11	-.07
Increase in insight	-.04	-.07	-.10	.19	.10
Mean causation	-.09	.12	-.22	.01	.11
Increase in causation	-.18	-.04	-.06	.24[+]	.25[+]

Note. N = 49. Openness (O), Neuroticism (N), Extraversion (E), Agreeableness (A), Conscientiousness (C).

** $p < .01$; * $p < .05$; [+] $p < .10$.

Appendices

Appendix A. *Coding Instructions.*

Positive Self-Transformation

This dimension measures the extent to which the individual has constructed a sense of positive transformation within the self in connection with the difficult life event described in the memory. Any subjectively positive lessons, insights, realizations, discoveries, etc., or indications of positive growth or change in the self or one's life can be viewed as evidence for positive self-transformation. Note that indications of positive self-transformation should be generalized beyond the specific situation and have an enduring quality. Concrete life changes such as changing one's major and changes in relationships may be coded as positive self-transformation as long as there is a sense that this change has a positive, transforming impact on the self. First, determine whether or not there is any evidence for positive self-transformation in the narrative. If not, give the person a 1 and move on to the next narrative. However, if you believe there is some evidence for positive self-transformation then, you must decide how to rate the narrative (2 to 5) based on the following: the vividness and elaboration of the transformation being described, the explicitness of the causal link between the event and transformation, the inner depth or psychological richness of the transformation (more external transformations such as a new relationship should not receive the highest rating unless the subjective impact of the self is made explicit), the subjective positivity of the transformation (1 = completely negative), the psychological centrality of the transformation to an individual's current sense of self/identity (for example, transformations that conclude a narrative tend to be psychologically central to the person).

| 1 | 2 | 3 | 4 | 5 |

1 = No evidence for positive self-transformation
2 = Suggestive evidence; positive self-transformation implied but not explicit
3 = Clear evidence for positive self-transformation, but it is not very vivid/causally integrated/deep/positive/central to self
4 = Clear evidence for positive self-transformation; somewhat vivid/causally integrated/deep/positive/central to self
5 = Clear evidence for positive self-transformation; very vivid/causally integrated/deep/positive/central to self

Appendix B. *Positive self-transformation.*

<u>High PST</u>:   The stress of college can sometimes be so overwhelming. School has
never really been a challenge for me. I always breezed through never studying and
getting A's and even charming my teachers into letting me turn in assignments and
papers late. However, when I transferred to William and Mary as a sophomore,
everything changed. My first year was not that difficult. I managed to skate through
with a minimal effort and still get good grades. My junior year, when I entered the
business school, I soon realized that I wasn't invincible. First semester junior year is
supposed to be the hardest, a weeding out of sorts. Well, I practically got weeded out.
It seemed like the work never ended. I had group projects, having to meet all the time
and late into the night. I had classes that I would go to simply for attendance purposes
but never as really there mentally because I was so lost and confused, I didn't even
want to try. Tests were a nightmare. I would know a few answers, completely guess at
others, and simply leave some unanswered. I used to only think an A or B was
acceptable. My standard now had become a C and in some instances I'm just happy I
passed. Though my semester grades never dropped bellow B-s, B became the norm
on my report card. An A was an exciting event. It was such a blow to my confidence
and self-esteem. Feeling down and out about my performance and never really having
any personal time because I was so overwhelmed and managed my time very poorly,
I was miserable. I drank six nights a week and became very depressed. My mom
would call and I would just sit and cry on the phone because I felt so pathetic.
Sometimes, I would not shower for two days. I just didn't have the energy. My
relationships with my friends suffered. No one wanted to hangout with me because I
had become such a drag. Despite their avid support in the beginning my attitude of
hopelessness soon discouraged my friends from trying to cheer me up. I felt like crap.
When the end of the semester finally came, I was so relieved. Christmas break was an
awesome opportunity for me to get myself together. Thinking about another three
semesters like my past semester was enough to motivate me to get my ass in gear.
Also, my parents though trying to be sympathetic that I had become so overwhelmed
were really disappointed in me. I decided I would just have to get on the ball. When I
came back from break, I attacked the semester with a positive attitude. I started
working out five times a week (having wanted to get back into shape since high
school), which gave me a ton of energy. I stopped drinking so much. I tried to
manage my time better. I made personal time for myself and worked on building
some incredible friendships. I got a lot more involved in my sorority, which became
and incredible source of support. Mainly, I accepted myself as being human.
Sometimes I would fail or not do as good as I had wanted, but now I just roll with the
punches. If I am disappointed, I simply sit down, evaluate what I can do to improve
the situation, and work harder to do better next time. I put my life into perspective.
Grades and school are important, but my happiness and well-being were more
important. This attitude has served me very well. I am really happy, just about to
complete the first semester of my senior year. As a result of my happiness with my
personal life, I have done better in my classes. I have incredible friends who I have
fun with but who I also study with. I am the kind of person that can only go so low
before I can't stand it anymore and get it together. I am proud to say I feel like my life

is very together right now.

Moderate PST: When my parents separated about four years ago I felt as though I had been hit by a speeding car, especially because I had never expected this to happen to me and because I really didn't sense any type of problems or tensions between my parents.

I think what scared me the most was the idea that I might not see my dad as much, and I also kind of felt sorry for my mom, because she was now left with me and my sister, who sometimes can be less than cooperative. At the beginning it was hard to imagine not seeing my dad in a couple of months or so, but soon I understood why my parents done. I guess it was better for them to separate before they started to hate each other, or simply fight all day, which I think would have affected me and my sister more.

It is hard for me not to have my dad around all the time, especially when I need to talk to him about some male issue, because I really don't feel that comfortable with my mom, when it comes to these issues. I also think I was a little let down because I had always looked up to my parents as the perfect couple, and it was especially disappointing when I saw my friends parents marriages, where they seemed to have some problems, but yet they were able to resolve them, and I could just not see why my parents couldn't resolve them.

I think this made me mature a little quicker because I suddenly became the man of the house, and I mean my mom really did need all the support she could get, and it made me feel really good about myself to know I was helping out my mom. But I also feel as though it affected many of my romantic relationships, because I find it hard to get close to people mainly because of the fear it will not last or that I will get hurt.

Low PST: Tony and I had a very tumultuous existence together. The thing is, it never really occurred to us to live without each other – it just wasn't an option. So I guess that's kind of an idea of our bond (or insanity). But I have to say that I defiantly take on what I've unfortunately learned form my parents, and put it into us, which, at some times, I wondered how it didn't break us. Not that Tony hasn't made his giant mistakes. Fidelity was never an actual issue (just one I perceived to be, thanks to lessons from Dad), but he lied. I say lied because things have changed between us, and I think that has as well. So that didn't help my mistrust. But my parents: my dad, I think had a lot of different problems with my mother, and they manifested in two ways, mistrust and complete resentment that she was overweight. He was sure that it was because she didn't love him enough, that she didn't lose the weight. This so helped to fuck up my self-esteem, and it is only perpetuated by the fact that my dad will point out when I'm looking a little "chubby". So he's passed the idea that I'll never really be pretty enough to me, and no matter how many times Tony whispers it to me that I'm beautiful, I can't really believe that myself. I don't know how to make myself see that. My self-esteem has so been almost shattered by what I've learned from my parents' dynamics. My mom took almost everything lying down from my dad, and I've never understood why. I had to be strong for everything, for her as well. Not that my mom isn't strong; she's the strongest person I know. But in turn,

everyone (including Tony) thinks I'm the strongest person <u>they</u> know. If that's true, I wonder why I feel so goddamn weak.

Appendix C. *Big Five Inventory.*

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others?* Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1. Disagree Strongly
2. Disagree a Little
3. Neither Agree nor Disagree
4. Agree a Little
5. Agree Strongly

I See Myself as Someone Who . . .

_____1. Is talkative
_____2. Tends to find fault with others
_____3. Does a thorough job
_____4. Is depressed, blue
_____5. Is original, comes up with new ideas
_____6. Is reserved
_____7. Is helpful and unselfish with others
_____8. Can be somewhat careless
_____9. Is relaxed, handles stress well
_____10. Is curious about many different things
_____11. Is full of energy
_____12. Starts quarrels with others
_____13. Is a reliable worker
_____14. Can be tense
_____15. Is ingenious, a deep thinker
_____16. Generates a lot of enthusiasm
_____17. Has a forgiving nature
_____18. Tends to be disorganized
_____19. Worries a lot
_____20. Has an active imagination
_____21. Tends to be quiet
_____22. Is generally trusting
_____23. Tends to be lazy
_____24. Is emotionally stable, not easily upset
_____25. Is inventive
_____26. Has an assertive personality
_____27. Can be cold and aloof
_____28. Perseveres until the task is finished
_____29. Can be moody
_____30. Values artistic, aesthetic experiences
_____31. Is sometimes shy, inhibited
_____32. Is considerate and kind to almost everyone
_____33. Does things efficiently
_____34. Remains calm in tense situations
_____35. Prefers work that is routine
_____36. Is outgoing, sociable
_____37. Is sometimes rude to others
_____38. Makes plans and follows through with them
_____39. Gets nervous easily
_____40. Likes to reflect, play with ideas
_____41. Has few artistic interests
_____42. Likes to cooperate with others
_____43. Is easily distracted
_____44. Is sophisticated in art, music, or literature

Appendix D. *Cover Page.*

Questionnaire Packet

Instructions:

1. Your packet includes the following questionnaires:
   a. Demographics Questionnaire
   b. Attitudes Questionnaire
   c. Events Questionnaire
   d. Emotion Questionnaire
   e. Life Questionnaire
   f. Self Description Questionnaire

2. These questionnaires may be in a different order than listed above. This is intentional.

3. Please answer the questionnaires in the order they are given in this packet.

4. Try to rate each statement. Try not to leave any question blank.

5. When you finish each questionnaire, move on to the next.

6. The scales for rating each questionnaire are included on each questionnaire. Please make sure you understand the rating scales.

7. Some questionnaires may include individual instructions and information, please make sure to read this information carefully.

8. When you have completed the packet, please sit quietly and wait for the group to finish.

9. Understand that others may take more time than you to finish their questionnaire or that you may take more time than others. Do not let this bother you, just answer each question carefully without brooding too long on an individual question.

10. Please remain seated after completion and await the debriefing.

11. If you have any questions, do not hesitate to ask.

Thank you for your participation.

Appendix E. *PANAS.*

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past few weeks. Use the following scale to record your answers.

1	2	3	4	5
Very slightly Or not at all	a little	moderately	quite a bit	extremely

_____ interested
_____ distressed
_____ excited
_____ upset
_____ strong
_____ guilty
_____ scared
_____ hostile
_____ enthusiastic
_____ proud
_____ irritable
_____ alert
_____ ashamed
_____ inspired
_____ nervous
_____ determined
_____ attentive
_____ jittery
_____ active
_____ afraid

Appendix F. *Satisfaction with Life Scale.*

Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neither agree nor disagree
5 = slightly agree
6 = agree
7 = strongly agree

1. In most ways my life is close to my ideal.

      1   2   3   4   5   6   7

2. The conditions of my life are excellent.

      1   2   3   4   5   6   7

3. I am satisfied with my life.

      1   2   3   4   5   6   7

4. So far I have gotten the important things I want in life.

      1   2   3   4   5   6   7

5. If I could live my life over, I would change almost nothing.

      1   2   3   4   5   6   7

Appendix G. *Self-concept Clarity.*

Self-description Questionnaire

Using the 1-5 scale provided below, please indicate your level of agreement or disagreement for each of the statements on the next two pages. Write the value that corresponds to your level of agreement or disagreement in the space provided to the left of each statement.

1 = Disagree Strongly
2 = Disagree Somewhat
3 = Neither Agree nor Disagree
4 = Agree Somewhat
5 = Agree Strongly

_____ 1. One day I might have one opinion of myself and on another day I might have another.
_____ 2. My beliefs about myself often conflict with one another.
_____ 3. I spend a lot of time wondering what kind of person I really am.
_____ 4. Sometimes I feel that I am not really the person I appear to be.
_____ 5. When I think about the kind of person I have been in the past, I am not sure what I was really like.
_____ 6. I seldom experience conflict between different aspects of my personality.
_____ 7. Sometimes I think I know other people better than I know myself.
_____ 8. My beliefs about myself seem to change frequently.
_____ 9. If I were asked to describe my personality, my description might be different from one day to another day.
_____ 10. Even if I wanted to, I don't think I could tell people what I'm really like.
_____ 11. In general I have a clear sense of who I am and what I am.
_____ 12. It is hard for me to make up my mind about things because I really don't know what I want.

Appendix H. *Ryff's Subjective Well-being Scale.*

The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers. Circle each number that best describes your present agreement or disagreement with each statement.

1: Strongly disagree; 2: Disagree somewhat; 3: Disagree slightly; 4: Agree slightly; 5: Agree somewhat; 6: Strongly agree

1. I am not interested in activities that will expand my horizons.
    1   2   3   4   5   6

2. I feel good when I think of what I've done in the past and what I hope to do in the future.
    1   2   3   4   5   6

3. When I look at the story of my life, I am pleased with how things have turned out.
    1   2   3   4   5   6

4. In general, I feel that I continue to learn more about myself as time goes by.
    1   2   3   4   5   6

5. I live life one day at a time and I don't really think about the future.
    1   2   3   4   5   6

6. In general, I feel confident and positive about myself.
    1   2   3   4   5   6

7. I am the kind of person who likes to give new things a try.
    1   2   3   4   5   6

8. I tend to focus on the present, because the future nearly always brings me problems.
    1   2   3   4   5   6

9. I feel like many of the people I know have gotten more out of life than I have.
    1   2   3   4   5   6

10. I don't want to try new ways of doing things-my life is fine the way it is.
    1   2   3   4   5   6

11. I have a sense of direction and purpose in life.
    1   2   3   4   5   6

12. Given the opportunity, there are many things about myself I would change.
    1   2   3   4   5   6

13. I think it is important to have new experiences that challenge how you think about yourself and about the world.
    1   2   3   4   5   6

14. My daily activities often seem trivial and unimportant to me.
    1   2   3   4   5   6

15. I like most aspects of my personality.
    1   2   3   4   5   6

16. When I think about it, I haven't really improved much as a person over the years.

   1   2   3   4   5   6

17. I don't have a good sense of what it is I am trying to accomplish in life.

   1   2   3   4   5   6

18. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.

   1   2   3   4   5   6

19. In my view, people of every age are able to continue growing and developing.

   1   2   3   4   5   6

20. I used to set goals for myself, but that now seems like a waste of time for me.

   1   2   3   4   5   6

21. In many ways, I feel disappointed about my achievements in life.

   1   2   3   4   5   6

22. With time, I have gained a lot of insight about life that has made me a stronger, more capable person.

   1   2   3   4   5   6

23. I enjoy making plans for the future and working to make them a reality.

   1   2   3   4   5   6

24. For the most part, I am proud of who I am and the life I lead.

   1   2   3   4   5   6

25. I have a sense that I have developed a lot as a person over time.

   1   2   3   4   5   6

26. I am an active person in carrying out the plans I set for myself.

   1   2   3   4   5   6

27. I envy many people for the lives they lead.

   1   2   3   4   5   6

28. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.

   1   2   3   4   5   6

29. Some people wander aimlessly through life, but I am not one of them.

   1   2   3   4   5   6

30. My attitude about myself is probably not as positive as most people feel about themselves.

   1   2   3   4   5   6

31. For me, life has been a continuous process of learning, changing, and growth.

   1   2   3   4   5   6

32. I sometimes feel as if I've done all there is to do in life.

   1   2   3   4   5   6

33. Many days I wake up feeling discouraged about how I have lived my life.

   1   2   3   4   5   6

34. I enjoy seeing how my views have changed and matured over the years.
    1   2   3   4   5   6

35. My aims in life have been more a source of satisfaction than frustration to me.
    1   2   3   4   5   6

36. The past has its ups and downs, but in general, I wouldn't want to change it.
    1   2   3   4   5   6

37. I gave up trying to make big improvements or changes in my life a long time ago.
    1   2   3   4   5   6

38. I find it satisfying to think about what I have accomplished in life.
    1   2   3   4   5   6

39. When I compare myself to friends and acquaintances, it makes me feel good about who I am.
    1   2   3   4   5   6

40. There is truth to saying that you can't teach an old dog new tricks.
    1   2   3   4   5   6

41. In the final analysis, I'm not so sure that my life adds up to much.
    1   2   3   4   5   6

42. Everyone has their weaknesses, but I seem to have more than my share.
    1   2   3   4   5   6

Appendix I. *Verbatim Script.*

Version A: Experimental Group

Introduction. Hello. Thank you for coming today. My name is Jennifer Smith. I am conducting research on the way individuals write about difficult experiences in their lives. Today you will answer a series of questionnaires. During the next week, you will write for fifteen minutes for four consecutive days on a difficult life experience. This may be a difficult thing for many of you to do, and I want you to know now that you are free to terminate your participation at any time and will not be penalized. However, you also may find the writing experience helpful and rewarding, and it is a plus with this study that all three of your research participation hours will be taken care with your participation in this one study. All of your writing will be completely confidential. You may request to have your writing returned to you at the end of the study. You will begin your writing this coming Monday, [insert date]. You are to write for fifteen minutes in a quite place where you will not be interrupted. The following day you must turn in your writing from the prior day between 11 and 3 to my lab area, Office 215 of Millington Hall [directions given from research room]. So, Friday you will turn in your last writing sample. I am now passing out a manila envelope. When you turn this in, please put your identification number on the outside. You will receive a similar envelope in which to place your next writing sample. In about three weeks on [insert date] you will return to [insert room] for a follow up assessment. During this follow-up assessment you will complete a number of questionnaires. This research is not wholly anonymous. You will be identified by you social security number for purposes of gaining access to your mass testing data. You must complete the mass testing within one week to receive full credit. However, all information is strictly confidential. Are there any questions? I am now passing around consent forms. If you are willing to participate please read the consent form carefully and sign it. Thank you. I will be handing out a packet of questionnaires. Please fill them out quietly. When you are finished please remain seated. Here are the questionnaires, please remember to write your SSN at the top of all of the questionnaires. As you complete the questionnaires, please leave quietly and pick up a sheet with my contact information and the contact information for Counseling Services. If, at any time during or after this study, you are having trouble with what you are writing, please contact them. Please know that everyone has difficult life events. We are not interested in identifying psychopathology, but rather in normal differences in how people think about difficult life events. Also, please contact me if you choose to terminate your participation. I will email you two days before the follow up assessment to remind you it is coming up. Please remember that the follow up session will take the full half-hour and plan accordingly. Thank you for coming, I will see you shortly.
Follow-up session. Hello again. I will be handing out a packet of questionnaires. Please fill them out quietly. When you are completed please remain seated. We will be here the full half-hour. When everyone has completed their questionnaires, there will be a short debriefing. Here are the questionnaires, please remember to write your SSN at the top of all of the questionnaires. Thank you....

[After questionnaires are completed] This study examined the way individuals construct identity through writing about difficult life events. You were in the experimental group and wrote for four days about traumatic events in your lives. Your writing will be analyzed for various themes having to do with emotions, thought processes about the impact of event, and its general impact on how you think and feel about yourself as a person – your self-concept or identity. The battery of questionnaires you just completed as well as those completed in the first assessment and during mass testing assessed various factors of personality, psychological and physical well-being as well as some further measures of identity. You will be compared to a control group who did no writing. Past research has shown that the writing that you did is beneficial to both psychological and physical health. This research is to determine how it also affects the health of your identity as expressed in your writing and in your questionnaires. Psychological theory and research suggests that an important part of identity development is the process of forming a positive and coherent story of your life. Difficult life events are sometimes hard to integrate into the life story, so this study was designed to investigate whether the process of writing about these events could change the way you think about the event in a way that has a positive impact on your overall sense of self. If you are interested in the final results of this study, please leave your name and email address on the sheet of paper at the front of the room. Are there any questions? Thank you again for your participation in my research, have a good day.

Version B: Control Group
Opening session. Hello. I will be handing out a packet of questionnaires concerning who you are and how you feel. Please fill them out quietly. When you are completed please remain seated. We will be here the full half-hour. The second part of this study will be completed in about three weeks on [insert date and time]. I will see you then. You must come to the follow up assessment to receive full credit for the study. I will email you two days before the follow up session to remind you. If you will terminate participation, you must email me 24 hours in advance of the follow up study so that you are not penalized for failure to complete the study. I will now pass around consent forms. As this research uses some information from mass testing, it is not completely anonymous. However, all of your responses are confidential. If you are willing to participate, please sign the consent form. Thank you. I am now passing out the questionnaire packets. Please write your SSN at the top of the packet. You may begin. You may go when you are finished with your questionnaire. Please pick up a sheet with my contact information on the way out.

Follow up session. Hello again. I will be handing out a packet of questionnaires. Please fill them out quietly. When you are completed please remain seated. We will be here the full half-hour. When everyone has completed their questionnaires, there will be a short debriefing. Here are the questionnaires. Thank you....

[After the questionnaires are complete] This study examined the way individuals construct identity through writing about difficult life events. You are in the control group. Those in the experimental group wrote for four days about traumatic events in their lives. Their writing will be analyzed for various themes

having to do with emotions, thought processes about the impact of event, and its general impact on how they think and feel about themselves as a person – their self-concept or identity. The battery of questionnaires you just completed, as well as those completed in the first assessment and during mass testing, assessed various factors of personality, psychological and physical well-being as well as some further measures of identity. Past research has shown that the writing that the experimental group did is beneficial to both psychological and physical health. This research is to determine how it also effects the health of identity as expressed in writing and in questionnaires. Psychological theory and research suggests that an important part of identity development is the process of forming a positive and coherent story of one's life. Difficult life events are sometimes hard to integrate into the life story, so this study was designed to investigate whether the process of writing about these events could change the way one thinks about the event in a way that has a positive impact on one's overall sense of self. If you are interested in the final results of this study, please leave your name and email address on the sheet of paper at the front of the room. Are there any questions? Thank you again for your participation in my research, have a good day.

Appendix J. *Consent Form.*

<div align="center">

<u>COLLEGE OF WILLIAM AND MARY</u>

</div>

PSYCHOLOGY DEPARTMENT CONSENT FORM

The general nature of this study of Writing about Difficult Life Events conducted by Jennifer Smith has been explained to me. I understand that I will be asked to write for fifteen minutes over four days about difficult events in my life and answer a series of questionnaires concerning my thoughts and beliefs. I understand that material gathered during mass testing will be used in this study. I further understand that my responses will be confidential and that my name will not be associated with any results of this study. I know that I may refuse to answer any question asked and that I may discontinue participation at any time. I also understand that any grade, payment, or credit for participation will not be affected by my responses or by my exercising of any rights. I am aware that I may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair (Dr. L. Ventis, x13875) or to the chair of the Psychology Ethics Committee (Dr. G. Shean, x13886). I am aware that I must be at least 18 years of age to participate. My signature bellows signifies my voluntary participation in this study.

_____   _____

Date   **Signature**

Appendix K. *Demographics Questionnaire.*

<u>Demographics Questionnaire</u>

Email ID (e.g. jlsmit) _____

SSN _____

Age _____

Gender _____

Circle year in school: Freshman   Sophomore   Junior
      Senior

How would you rate your overall physical health on a scale of 1-7?

1	2	3	4	5	6	7
Very Poor		Somewhat	Moderate	Somewhat		Very Good

BIBLIOGRAPHY

Baerger, D.R., & McAdams, D.P. (1999). Life story coherence and its relation to

psychological well-being. *Narrative Inquiry, 9,* 69-96.

Campbell, J.D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman,

D. R. (1996). Self-concept clarity: Measurement, personality correlates, and

cultural boundaries. *Journal of Personality & Social Psychology. 70,* 141-156.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With

Life Scale. *Journal of Personality Assessment. 49,* 71-75.

Emmons, R. A. (2003). Personal goals, life meaning, and virtue. In C. L. M, Keyes &

J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived.* (pp. 105-

128). DC: American Psychological Association.

Erikson, E. (1968). *Identity: Youth and crisis.* New York: Norton.

Esterling, B. A., L'Abate, L., Murray, E. J., & Pennebaker, J. W. (1999). Empirical

foundations for writing in prevention and psychotherapy. *Clinical Psychology*

Review, 19, 79-96.

Francis, M. E., & Pennebaker, J. W. (1992). Putting stress into words: The impact of

writing on physiological, absentee, and self-reported emotional well-being

measures. *American Journal of Health Promotion, 6,* 280-287.

Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in

adolescence. *Psychological Bulletin, 128,* 748-769.

Helson, R., Stewart, A. J., & Ostrove, J. (1995). Identity in three cohorts of midlife

women. *Journal of Personality & Social Psychology, 69,* 544-557.

John, O. P., & Srivastava, S. (1999). The Big Five Trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin, & O. P. John (Eds.), *Handbook of personality: Theory and research (2nd ed.)*. New York, NY, US: The Guilford Press.

King, L. A. (2001). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin, 27*, 798-807.

King, L. A., Scollon, C. K., Ramsey, C., & Williams, T. (2000). Stories of life transition: Subjective well-being and ego development in parents of children with downs syndrome. *Journal of Research in Personality, 34*, 509-536.

McAdams, D. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry, 7*, 295-321.

McAdams, D. (2000). Attachment, intimacy, and generativity. *Psychological Inquiry, 11*, 117-120.

McAdams, D., Reynolds, J., Lewis, M., Patten, A., & Bowman, P. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narratives and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27*, 474-485.

Marcia, J. E. (1987). The identity status approach to the study of ego identity development. In T. Honess, & K. Yardley (Eds.), *Self and identity: Perspectives across the lifespan* (pp. 161-171). New York: Routledge & Kegan Paul, Inc.

McCrae, R. R., & Costa, P. T. (1999). A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research (2nd*

ed.), (pp. 139-153). New York: The Guilford Press.

Pals, J. L. (1999). Identity consolidation in early adulthood: Relations with ego-resiliency, the context of marriage, and personality change. *Journal of Personality, 67,* 295-329.

Pals, J. L. (2000). Self-narratives of difficult life experiences in adulthood. Unpublished doctoral dissertation, University of California, Berkeley.

Pals, J.L. (2002). Unpublished research. College of William and Mary.

Pennebaker, J.W. (1985). Traumatic experience and psychosomatic disease: Exploring the roles of behavioral inhibition, obsession, and confiding. *Canadian Psychology, 26,* 82-95.

Pennebaker, J.W. (1993). Putting stress into words: Health, linguistic, and therapeutic implications. *Behaviour Research & Therapy, 31,* 539-548.

Pennebaker, J. W. (1997). Writing about emotional experiences as a therapeutic process. *Psychological Science, 8,* 162-166.

Pennebaker, J.W., Barger, S.D., & Tiebout, J. (1989). Disclosure of traumas and health among Holocaust survivors. *Psychosomatic Medicine, 51,* 577-589.

Pennebaker, J.W. & Francis, M.E. (1996). Cognitive, emotional, and language processes in disclosure. *Cognition & Emotion, 10,* 601-626.

Pennebaker, J. W., & Keough, K. A. (1999). Revealing, organizing, and reorganizing the self in response to stress and emotion. In R. J. Contrada, & R. D. Ashmore (Eds.), *Self, Social Identity and Physical Health* (pp. 101-121). New York: Oxford University Press.

Pennebaker, J. W., Kiecolt-Glaser, J., & Glaser, R. (1988). Disclosure of traumas and

immune function: Health implications of psychotherapy. *Journal of Consulting and Clinical Psychology, 56,* 239-245.

Pennebaker, J. W., Mayne, T. J., & Francis, M. E. (1997). Linguistic predictors of adaptive bereavement. *Journal of Personality and Social Psychology, 72,* 863-871.

Petrie, K. J., Booth, R., Pennebaker, J. W., Davison, K. P., & Thomas, M. (1995). Disclosure of trauma and immune response to Hepatitis B vaccination program. *Journal of Consulting and Clinical Psychology, 63,* 787-792.

Rogers, Carl R. (1947). Some observations on the organization of personality. *American Psychologist, 2,* 358-368.

Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57,* 1069-1081.

Smith, J. L., & Pals, J. L. (2003, February). *The relation of religious narrative identity to personality and well-being.* Poster session presented at the annual conference of the Society of Personality and Social Psychology, Los Angeles, CA.

Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology, 66,* 174-184.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality & Social Psychology. 54,* 1063-1070.

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