

MECHANISMS OF PERSONALITY AND IDENTITY: THE ROLE OF NARRATIVE

A Dissertation

by

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ABSTRACT

Narrative Identity is a description of the qualities of stories that people tell about themselves. Researchers interested in Narrative Identity consider it to be a distinct level of personality and have developed metrics to quantify adaptive qualities in stories. Recent debates about the classification of personality problems in the DSM-5 Alternative Model of Personality Disorders (AMPD) have led to several attempts to distinguish functioning (Criterion A) from traits (Criterion B). Current conceptualizations of personality and personality disorder suggest that there is an underlying personality impairment that demonstrates the severity of personality problems and hence is predictive of the likelihood of personality disorder. The current study asked four questions: first, is there an underlying global developmental quality to Narrative Identity variables? Secondly, are Narrative Identity variables a good analogue for levels of personality functioning? Third, what is the impact of completing Narrative Identity tasks? Finally, our fourth question was whether there were positive impacts when people were given a re-storying exercise. We found that instead of a unidimensional structure to Narrative Identity variables, there was a four factor structure, meaning that this style of quantifying Narrative Identity results in categorical themes. We also found that the Levels of Personality Functioning Scale – Self Report (LPFS-SR) was not incrementally predictive of these Narrative Themes above and beyond traits, but this may be as a result of differences in measurement of Narrative Identity. An impact of Narrative activities is that Self-Concept Clarity is improved after completing stories, and endorsements of Difficulty, Arousal and perceived Pleasure after completing the task seem to be prompt specific. There were differential impacts with regards to personality functioning, in that people with personality impairment tended to rate the Narrative

tasks as being more difficult, in some instances more arousing, and they were less likely to demonstrate improvements in self-concept clarity. Re-storying (telling a story for a second time after being instructed on how to improve adaptive qualities of the story) also resulted in a reduced likelihood of improved self-concept clarity in participants with personality impairment.

DEDICATION

To Ms. Hernandez.

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The data analyzed for all sections was collected via the Texas A&M University Psychology Subject Pool. The analyses depicted in all sections were directly supervised by Dr. Les Morey of the Department of Psychological and Brain Sciences and have not yet been published.

All other work conducted for the dissertation was completed by the student independently.

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1. INTRODUCTION

According to Erikson (1960), identity begins with the development of the individual's orientation between an "inner population of remembered and anticipated sensations and images which are firmly correlated with an outer population of familiar and predictable things and people" (p. 247). This is a useful frame, as it prepares the reader to view identity from the lenses of the individual's internal self as well as their interpersonal experience. From this perspective, individual behavior occurs *after* the interaction between disposition and environment has been synthesized.

Within this study, we suggest that there is a core element of personality at work in the synthesis of the internal and the interpersonal. The American Psychiatric Association's (APA) Diagnostic and Statistical Manual, fifth edition (DSM-5) Section III Alternative model of personality (hereafter described as the AMPD) might describe this as self and interpersonal *Functioning* (versus *Impairment*), while McAdams and colleagues might describe this as *Narrative Identity* or the capability of storytelling about one's life. We explore the quality of individuals' identities from two perspectives: studying Narrative Identity as an assessment of identity functioning, while also as a potential influence upon identity functioning. To address these as empirical questions, we have developed four specific aims that address different aspects of the relationship between Narrative Identity and personality functioning. These aims and the pertinent literature on these topics are detailed in the following sections.

1.1. Specific Aim I: Evaluating a Global "Developmental Quality" Metric for Narrative Activity

One of the most widely used methods for eliciting narrative activity, and measuring its characteristics, is McAdams' (2008) Life Story Interview (LSI), which is a semi-structured interview protocol. This protocol is a model of adult identity that emphasizes narrative and

the storied nature of human conduct using guided prompts for life chapters, key scenes and personal ideology. Adler and colleagues (2017) note that while the LSI is the most popularly utilized, the design of prompts may deviate substantially given the research questions, feasibility of face-to-face versus electronic responding and the ethical considerations that are unique to narrative activity. Thus, such deviations have been commonplace within research on this topic. Adler et al describe several methodological strategies for gleaning quantitative data from the narratives people tell about themselves, identifying the four most common domains for describing narrative variables: *Motivational Themes*, *Affective Themes*, *Themes of Integrative Meaning* and *Structural Elements of Narratives*. Within these domains, the authors identify eleven subdomains that have been most commonly measured in research, summarized in Figure 1 and Table I below. As the Adler et al (2017) paper acknowledges, these 11 variables, as they are commonly defined, present considerable overlap.

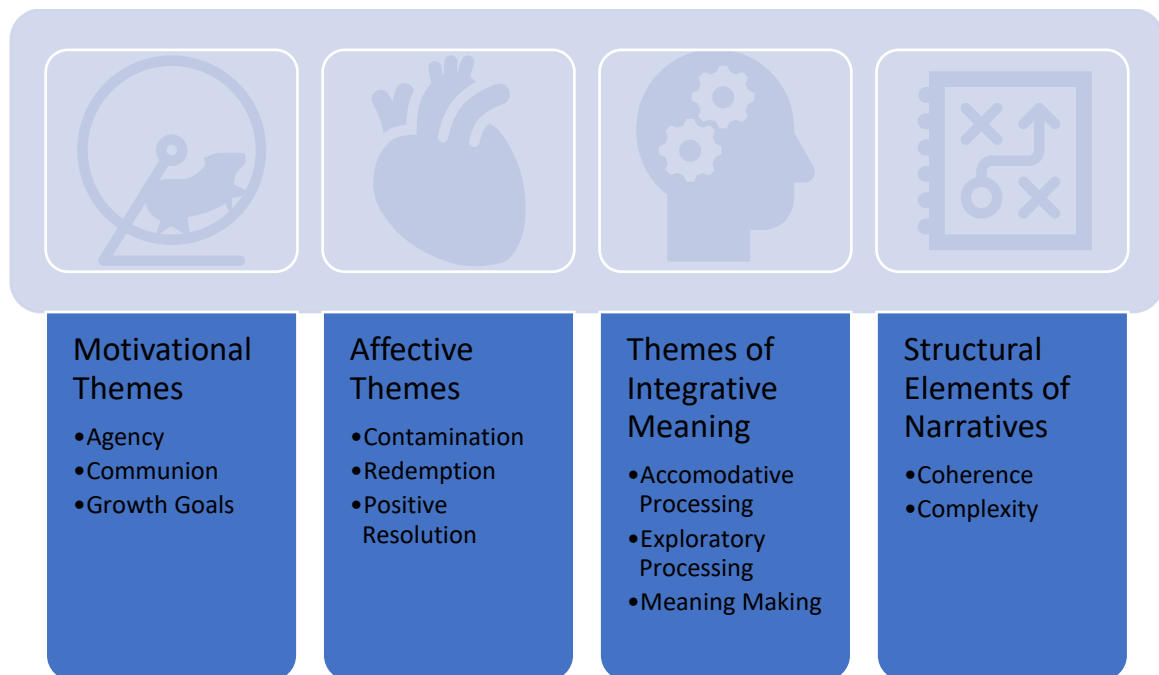


Figure 1 Eleven Narrative Coding Variables as Described in Adler, et al (2017)

Table 1 Commonly Assessed Narrative Variables (as Adapted by Adler et al, 2017)

Theme Subdomain	Definition
Agency	The degree to which the protagonist can initiate changes on his or her own, achieve some degree of control over the course of his or her experiences, and affect his or her own life. This is often exemplified by aspects of self-mastery and control, status striving, achievement, and power.
Communion	The degree to which the protagonist aims to have a sense of togetherness and harmony with other people or their environment, to share, help, connect to, and care for others.
Growth Goals	The degree to which the protagonist makes intentional efforts to guide his or her self-development in a personally meaningful direction, oriented toward personal growth.
Contamination	The protagonist describes an event that moves from a good, affectively positive scene to a bad, affectively negative scene, in which good things turn into bad outcomes.
Redemption	The protagonist describes an event that moves from a bad, affectively negative scene to a subsequent good, affectively positive scene. The bad is redeemed, salvaged, mitigated, or made better in light of the ensuing good.

Table 1**Continued**

Theme Subdomain	Definition
Positive resolution	The protagonist is able to come to peace with, or let go of, a challenging event.
Accommodative processing	The degree to which the protagonist has been forced to change, centrally and qualitatively, his or her views of the self and world, by actively experiencing a paradigmatic shift that requires a revision of structures and/or important changes in response to the environment.
Exploratory processing	The degree to which the protagonist makes an active and engaged effort to explore, reflect on, or analyze a difficult experience with openness to learning from it and incorporating a sense of change into the life story.
Meaning-Making	The degree to which the protagonist learns something or gleans a message from an event (e.g., no meaning, vague meaning, learning concrete lessons, gaining deep insights).
Coherence	The degree to which the narrator situates the characters of his story and their actions in a specific context, the story follows a temporal sequence of goal-oriented actions that are culturally recognized, emotions are clearly expressed in support of the point of the narrative, and narrative is integrated into larger life themes and meanings.
Complexity	The degree of engagement in the narrative processing, as shown by depth of thought and nuance, such as seeing a variety of perspectives or emotions.

One of the studies conducted by Adler, Wagner, and McAdams (2007) administered the *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985), the *Center for Epidemiologic Studies Depression Scale* (Eaton, Muntaner, Smith, Tien, & Ybarra, 2004), the *Big Five Inventory* (BFI, John, Donahue & Kentle, 1991; John, Nauman & Soto, 2008), the *Washington University Sentence Completion Test of Ego Development* (SCT; Hy & Loevinger, 1996; Loevinger & Wessler, 1970) and the *Positive and Negative Affect Schedule* (Watson, Clark, & Tellegen, 1988), and collected narratives of 8 critical events from the LSI with particular focus on the variable of *Coherence*. Results showed positive correlations among all coded criteria (i.e. Coherence: defined as the composite score from the four indices of *orientation, structure, affect* and *integration*), and between psychological well-being and each coded criterion. In terms of demographic details, education was positively related to a participant's life satisfaction, but not to happiness or depression. Female gender was also associated with narrative coherence, but the association between coherence and well-being persisted even when demographic information was controlled for. Additionally, individuals who were high in Openness to experience and those at higher stages of ego development were able to construct stories about their experiences in psychotherapy that were more coherent than their low-Openness and low-stage ego development peers, even controlling for the influence of these demographic variables. Using conventional themes and coding offer guidance on narrative utility, and further illuminating the known associations between those themes and other variables of interest, particularly as it relates to mental health outcomes and adaptive behavior is a future direction of interest in the current study.

To put narrative activity into practical context, one important environment for studying narrative is in the therapy room. As Adler, Wagner and McAdams (2007) suggest, "The internalized and evolving stories people construct about their lives function to integrate diverse experiences and provide people's lives with some degree of unity and purpose"

(p.1180). There is support in the narrative literature for the idea that this function - integration of diverse experiences in the form of story-telling - is the underlying, general adaptive quality of narrative, and that this reflects functioning at a level outside of personality traits. For example, the Adler et al. (2007) study mentioned above found that a group of former psychotherapy clients that were high in trait Openness to experience and those at higher stages of ego development told more coherent stories about their therapy experiences. In their sample, the relationship between ego development and narrative coherence remained significant even when controlling for Openness. The authors conclude that psychotherapy requires this ability to integrate stories, evidenced by more coherent stories, and that its presence is evidence of a more sophisticated framework for meaning-making.

In a paper by Waters and Fivush (2016), the authors tested the hypothesis that coherent accounts of identity are especially adaptive by examining relations between narrative coherence of personally significant autobiographical memories and three psychological well-being components (i.e., purpose and meaning, positive self-view, and positive relationships). They found that constructing coherent autobiographical narratives was related to these psychological well-being metrics. They also measured narratives' relevance to identity and found that this coherence/well-being relationship was moderated by the narratives' relevance to identity (i.e. personally significant memories versus generic events) and this moderation held after controlling for narrative ability more generally (i.e., coherence of generic/recurring events). The authors concluded that the coherent Narrative Identity hypothesis was a plausible predictor of well-being and offer the assertion that the integration of unique events is a critical feature of identity construction in emerging adulthood.

Bauer, McAdams and Pals (2006) define eudaimonic well-being as a positive psychological state that extends beyond the sense of having pleasure and meaning in one's life, to include higher degrees of psychosocial integration in that meaning. To operationalize

these constructs in their review, they used self-report well-being and ego development as metrics. They found that people indicating higher levels of eudaimonic well-being tended to emphasize *personal growth* in their life stories, with different kinds of personal growth corresponding to different facets of eudaimonic well-being. The sample also tended to frame difficult life experiences as transformative experiences wherein they suffered deep pain but gained new insights about the self. The authors noted the narrators' move from suffering to an enhanced status or state, with stories often following a culturally-shaped (American) script of *redemption*, which is often conceived as upward social mobility, liberation, recovery, atonement, or the full actualization of the inner self.

In terms of understanding the relationship between Narrative Identity and individual functioning, various studies have suggested that specific characteristics of storytelling scripts (e.g. the presence of coherence, Communion, Agency, personal growth and redemptive themes and low endorsement of contamination) are adaptive because support for positive associations between such themes and psychological well-being (Waters & Fivush, 2016; Adler, Lodi-Smith, Philippe & Houle, 2015, etc.), trajectories of mental health (Adler et al, 2015) and well-being, or happiness (Bauer, McAdams & Pals, 2006) have been demonstrated.

In a discussion of the measurement of narrative themes, McAdams, Hoffman, Mansfeild and Day (1996) found that comparison of coded Narrative themes of *Agency* and *Communion* provided empirical support for associations between these variables and social motives (operationalized using the *Thematic Apperception Test*, TAT; Murray, 1991), accounts of personal strivings, and self-reported needs (as defined by the *Personality Research Form*, PRF; Jackson, 1989). *Agency*, by their definition, includes four subcomponents, including *Self-Mastery*, *Status*, *Achievement/Responsibility* and *Empowerment*. *Communion* was defined by the authors as “the participation of the individual

in some larger organism of which the individual is a part” (p. 340), also with four subcomponents: *Love/friendship*, *Dialogue*, *Care/help* and *Community*.

Authors have also used narrative data to predict psychotherapeutic outcome, mental health and interpersonal effectiveness (e.g. Adler, 2011; Singer, Blagov, Berry, & Oost, 2013). The Adler (2011) paper used a multi-wave longitudinal investigation to examine short-term personality functioning change by recording participants’ Narrative Identity and mental health status. Forty-seven adults wrote personal narratives prior to beginning psychotherapy and after every session over 12 assessment points while concurrently completing a measure of mental health, the Systemic Therapy Inventory of Change (STIC; Pinsof et al. 2009). Narratives were coded for the themes of Agency and coherence, which Adler describes as capturing “the dual aims” (p. 368) of Narrative Identity: *purpose* and *unity*. The results showed that narrative themes of *Agency* and *Coherence* were not significantly correlated with each other, but that *Agency* was significantly and positively correlated with clients’ overall mental health (i.e. STIC scores). Narrative *Coherence* was also significantly positively correlated with clients’ ego development (via a sentence completion task).

Adler, Chin, Kolisetty, and Oltmanns (2012) summarize literature on the experience of a central Difficulty that individuals with BPD have in construing their own sense of self in an empowered or influential way (operationalized by the narrative theme of *Agency*, e.g., Bateman & Fonagy, 2006; Bradley & Westen, 2005; Fuchs, 2007; Heard & Linehan, 1993; Jorgensen, 2006, 2010; Wilkinson-Ryan & Westen, 2000). In the Adler et al. (2012) sample of forty older adults ($M_{age} = 59$ years), 20 with features of BPD and a matched sample of 20 without BPD, the themes of *Agency*, *Communion fulfilment* (but not *Communion*), and narrative coherence significantly distinguished the stories of those people with features of BPD from those without the disorder. That is, these themes were all significantly negatively

correlated with multiple measures of BPD. Additionally, associations between the theme of Agency and psychopathology were evident six and twelve months following the life story interview.

Here, we note a parallel between Adler's (2011) dual aims of *purpose* and *unity* and the AMPD's *Self-functioning* and *Interpersonal-functioning* definitions. *Agency* and *Coherence* in Adler's commentary are essential components of healthy narrative: an adaptive feature of personality. Readers will recall that higher scores on *Agency* describe protagonists who can affect their own lives, initiate changes on their own, and achieve some degree of control over the course of their experiences, (Adler, 2011). The Adler paper operationalized *Coherence* by coding four subcomponents including story *Orientation*, *Structure*, *Affect* and *Integration* and created a composite *Coherence* score. Adler's *Agency* and *Coherence* definitions parallel the AMPD's *Self-functioning* which describes *Identity* as "an experience of oneself as unique, with clear boundaries between self and others, stability of self-esteem and accuracy of self-appraisal; capacity for, and ability to regulate a range of emotional experience." and *Self-direction* which describes the pursuit of coherent and meaningful short-term and life goals; utilization of constructive and prosocial internal standards of behavior, coupled with the ability to "self-reflect productively." (APA, 2013, p.762). However, to this point there have been no investigations into the empirical interrelationships among these features of narrative products, nor has there been a specific delineation as to which features characterize people who are able to narrate "well," or in the most healthy ways versus those who do so poorly.

Criterion A of the AMPD specifically describes a single global dimension of personality, involving an assessment of self/interpersonal *functioning* that includes identity problems among other related dysfunctions. In theoretical accounts of personality disorders such as that provided by Kernberg (e.g., 1984), problematic or "diffused" identity is thought

to lie at the core of such problems. Identity diffusion is described as “a poorly integrated concept of the self and of significant others . . . reflected in the subjective experience of chronic emptiness, contradictory self-perceptions, [and] contradictory behavior that cannot be integrated in an emotionally meaningful way,” (Kernberg, 1984, p. 12). Identity diffusion has most commonly been associated with personality disorders, particularly Borderline Personality Disorder, but Kernberg notes that the level of identity integration is what tends to distinguish milder from more severe personality problems.

A review conducted by Adler, Lodi-Smith, Philippe & Houle (2015b) looked at 30 studies, representing more than 5000 participants, offering support that narrative variables provide incremental evidence of well-being. *Motivational*, *Affective*, and *Integrative Meaning* themes were the *most* supported as predictors of well-being as it is broadly defined in these studies (e.g. lower observance of depression symptoms, with higher endorsements of satisfaction with life, measures of happiness etc), but *Structural* themes, particularly *Coherence*, are the most widely discussed in narrative literature. The authors conclude that the status of structural elements’ incremental validity as correlates and predictors of wellbeing is not as firmly established as the theory of Narrative Identity posits, even if it makes sense conceptually that the unifying aspects of narrative structure ought to be distinctly associated with well-being from dispositional traits or other individual difference variables. Further empirical work is needed to close this gap.

What then is the essence of this story-telling capability? According to Singer, Blagov, Berry and Oost (2012), “specific memories are textured and affectively evocative reconstructions of the past” (p. 6). They conclude that difficulties in activating specific autobiographical memories results in maladaptive functioning because it inhibits cognitive-affective information available through re-experiencing vivid memories. The authors state that healthy Narrative Identity combines memory specificity with adaptive meaning-making

to achieve insight and well-being. Their assessment is that vivid memories can provide cognitive information about the probability of a desired goal while failures to develop good narrative scripts - i.e. self-defining memories that share repetitive emotion-outcome sequences through abstracted templates that filter cognitive-affective processing indicates some dysfunction in cognitive-affective process.

If the AMPD conceptualization of personality functioning as strongly unidimensional is true, there is reason to believe that a single dimension reflecting the “developmental quality” of narrative activity can be identified from the various descriptive features provided by Adler et al. (2017). Within this study, we will test for a central theme, using factor analysis methods, that relates to a mature and well-developed sense of identity. It is hypothesized that a large first factor among different characteristics of narratives will reflect this developmental quality, with particular loadings from *Coherence, Agency, Communion, Redemption, Meaning-Making, Contamination* and *Positive Resolution*. It is further anticipated that this factor will be strongly related to indicators of AMPD *Criterion A* (as opposed to *Criterion B*, as described in *Aim II, below*). Even if a more complex factor structure should emerge, having clearer metrics for the elements of narrative activity that represent adaptive qualities of personality would be beneficial because this may refine the use of narrative in intervention settings, as well as distinguish aspects of narrative that are in fact maladaptive.

In the studies above, the case has been made for a level of personality functioning that assists individuals in creating “good” or healthy narratives. This section of the paper has focused on the qualities that may factor into this ability. Within the current investigation, we hypothesize that an analysis of coded narrative variables will load heavily on a large first “factor,” which will aid in further defining “good” life stories. Following this investigation is an inquiry into the impacts of engaging such activity, particularly in terms of affective

responses and in aid of Self-Concept Clarity. This is further discussed in Specific Aim III. In Specific Aim II, the relationship between narrative metrics and personality functioning is discussed.

1.2. Specific Aim II: DSM-5 Personality Functioning and Traits Are Distinct, with Narrative Identity Uniquely Related to Functioning

The DSM-5 introduced a novel model for personality disorders in Section III as an “alternative model” (or AMPD), which reflected a radical reformulation of the nature of personality problems. As alluded to above, in this model all personality disorders (PDs) are characterized by two important and distinct aspects: impairments in personality (self/interpersonal) functioning (described within the AMPD as *Criterion A* for personality disorder), and pathological personality traits (described as *Criterion B*; APA, 2013). This reformulation was deemed necessary because of extensive critiques of a categorical depiction of personality disorder, and the predominance of comorbid and seemingly non-distinct personality disorder (e.g. Widiger, Livesley & Clark, 2009; Few et al., 2013). These two elements of personality disorder can be combined within the alternative model to identify traditional categorical PD concepts (e.g., Morey & Skodol, 2014). This is beneficial because it supports the DSM-5 goals of preserving “continuity with current clinical practice, while also introducing a new approach that aims to address numerous shortcomings of the current approach to personality disorders.” (APA, 2013, p. 761).

Within the AMPD, *Criterion A* impairment was designed to capture general severity of personality problems. According to Bender, Morey and Skodol (2011) there had previously been “little specific information about the optimum characterization of severity as related to personality problems” (p. 332). They purport that central disturbances of PDs of all types relate to how one views one’s self and other people, a theoretically (e.g. Prichard, 1835;

Ronningstam, 2009) and empirically (e.g. Galton, 1887; Hopwood et al. 2011) grounded idea that encompasses the AMPD *Criterion A*.

According to the AMPD conceptualization, to establish a diagnosis of personality disorder, DSM-5 Section III *Criterion A* requires evaluation of disturbances in self and interpersonal functioning that constitute the core of personality psychopathology. The DSM-5 task force identified four key elements of personality functioning, organized by the domains of *Self* (Identity and Self-direction) and *Interpersonal* (Empathy and Intimacy) functioning. The model describes impairment on a continuum ranging from healthy, adaptive functioning to extreme dysfunction. The AMPD posits that “impairment in personality functioning predicts the presence of a personality disorder, and the severity of impairment predicts whether an individual has more than one personality disorder or one of the more typically severe personality disorders.” (APA, 2013, p. 762). One premise of this model is that there is an underlying quality that drives personality dysfunction – an empirical question that has been pursued (e.g. Morey, Bender & Skodol, 2011) and debated (e.g. Few and colleagues, 2013).

The AMPD defines *identity* as the “experience of oneself as unique, with clear boundaries between self and others, stability of self-esteem and accuracy of self-appraisal; capacity for, and ability to regulate a range of emotional experience.” (APA, 2013, p.762). It defines *Self-direction* as the pursuit of coherent and meaningful short-term and life goals; utilization of constructive and prosocial internal standards of behavior, coupled with the ability to “self-reflect productively.” (p. 762). In terms of interpersonal functioning, *empathy* is described by the task force as comprehension and appreciation of other’s experiences and motivations; tolerance of differing perspectives and understanding the effects of one’s own behavior on others. *Intimacy* is described as depth and duration of connection with others including a desire and capacity for closeness, and a mutuality of regard reflected in

interpersonal behavior. Rather than being viewed as distinct problems, the impairments across these four are thought to reflect a core deficit that leads to problems in each of these areas. This framework is based on the idea that compelling evidence of essential commonalities among PDs (reflected in the exceptionally high comorbidity of traditional categorical PD diagnoses) is reflective of a general impairment of personality functioning that in itself is highly relevant to clinical decision making (e.g. Morey, Bender, & Skodol, 2013).

The DSM-5 Personality Disorders work group developed a rating scale for assessing an individual's level of impairment (the Levels of Personality Functioning Scale, LPFS), and included this measure in Section III. Morey et al. (2011) tested the theoretical "latent dimension of personality pathology" (p. 347) using item response theory (IRT) and found that IRT-based estimates of participants' standings on a latent dimension of personality pathology were significantly related to the diagnosis of *DSM-IV* personality disorder, as well as to personality disorder comorbidity. This was a substantial bolster for utility arguments that sought to find a more relevant clinical decision-making tool. Further analyses indicated that the same continuum could be used to capture the distribution of pathology severity across the range of *DSM-IV* personality disorders. Severity of personality dysfunction in those areas of the self and interpersonal functioning, then, were identified as important predictive factors.

The LPFS (Bender, Morey, & Skodol, 2011) measures the broad levels and domains of impairment included in the AMPD. In terms of the field's reception of the AMPD proposals, debates on personality disorder conceptualization have been rampant. To continue to address these concerns, Morey, Bender, and Skodol (2013) measured the association between the LPFS and *DSM-IV* PD diagnoses, measures of personality functioning, and clinical judgment. They found associations with other measures of personality psychopathology and clinical judgments related to risk, prognosis, and treatment – support for the incremental utility of impairment variance (*Criterion A*) beyond traits (*Criterion B*).

Within the AMPD, the specific form of personality problems in a given patient are described by *Criterion B*, which requires the identification of one or more pathological personality traits. It defines these pathological personality traits within five broad domains (*Negative Affectivity* vs. Emotional stability, *Detachment* vs. Extraversion/Engagement, *Antagonism* vs. Agreeableness, *Disinhibition* vs. Conscientiousness/Constraint and *Psychoticism* vs. Lucidity) and includes twenty-five specific trait facets. These traits extend continuously from normal to problematic traits, which is relevant here because there will be differences on these characteristics even within a non-clinical population.

Making distinctions between functional impairment and pathological personality traits is an ongoing pursuit, as further understanding the mechanisms at play will advance future intervention strategies. There has been substantial debate over the incremental utility of *Criterion A* above and beyond that explained by *Criterion B* (pathological personality traits), but researchers (e.g. Few et al., 2013; Zimmerman et al., 2015, Anderson & Sellbom, 2018) have provided mixed evidence that the functional impairment criterion measures a construct beyond that which can be captured by personality traits.

While Wygant and colleagues (2016) evaluated the incremental utility of interview-rated antisocial PD specific impairment (guided by the LPFS) in predicting Section II antisocial PD and psychopathy and found that the addition of impairment incrementally predicted antisocial PD and psychopathy constructs above and beyond Section III antisocial PD traits, Few and colleagues (2013) did not find the same incremental utility. They asked trained graduate student raters to rate individuals in a community sample on the four levels of functioning included in *Criterion A*. The authors found that impairment ratings were associated with DSM–5 Section II PDs, and DSM–5 Section III dimensional personality traits. However, they also found that, although dimensional traits (*Criterion B*) demonstrated

incremental validity in predicting DSM–5 Section II PDs above impairment (Criterion A), impairment criteria did not demonstrate incremental validity beyond traits.

In the search for incremental predictive utility for Criterion A above and beyond that observed in Criterion B, Hentschel and Pukrop (2014) found that the General Assessment of Personality Disorder (GAPD, Hentschel & Livesley, 2013; measuring Criterion A) increased the variance explained by the Dimensional Assessment of Personality Pathology (DAPP, Livesley & Jackson, 2009) by 1.5%, and the NEO-PI-R by 6.5% (these latter two instruments used in their study to measure Criterion B). It should be noted that while the DAPP is an assessment tool aimed at assessing personality disorders along a continuum from mild to extreme trait manifestations, the NEO-PI-R (Costa & McCrae, 1992) is a measure of the five major domains of personality, aimed at facilitating a comprehensive and detailed assessment of *normal* adult personality. This study provides a precedent for one direction in our work: if the variance explained by Criterion A incrementally increases in a model that includes normal personality as a predictor variable in addition to a personality pathology metric then we should find a similar result when using narrative as an indicator of *functioning* versus an indicator of personality traits.

1.2.1. The Role of Narrative

One of the key elements of Criterion A’s personality dysfunction involves problems in identity. Although many different aspects of identity have been studied, an emerging literature has identified Narrative Identity as a particularly important part of adaptive human personality (e.g. Singer et al, 2013; Adler et al 2012). Researchers (McAdams 1995, 2011; McAdams & McClean, 2013; McAdams & Pals, 2006) have suggested that this ability to tell the story of one’s life experiences is a distinct and necessary aspect of personality.

From the time of Allport (1962), to Prichard (1835), to Menninger (1963), the field has been working from a lexical model to describe personality in the most parsimonious way.

The lexical hypothesis (Allport & Odbert, 1936) is a concept in personality psychology and psychometrics that proposes that the personality traits and differences that are the most important and relevant to people eventually become a part of their language. This is interesting because it highlights the importance humans have placed on language in terms of how we understand ourselves, and how we categorize others. More recent research (McAdams 1995; McAdams & McClean, 2013), has described an element of personality that takes the language-based definition of the self to an even more practically defined role.

Narrative Identity, or the stories one tells about oneself has become a burgeoning area of research in the last three decades. How do individuals narrate their experiences? The choice and quality of the stories a person tells about themselves is an arrangement of language and learning the role of language in identity development and adaptation seems to have several important ties to what we know about personality, and human identity development. One important consideration is an individual's level of self functioning as a determining factor in the nature of this narrative. Is an individual's approach or avoidance of specific narratives, or their manner of resolving these narratives, indicative of their level of personality functioning? We believe that Narrative Identity reflects an adaptive quality, and that a "good" narrative has an underlying, general quality that is indicative of abilities to narrate (Self-functioning) and to communicate that conceptualization to others (Interpersonal-functioning), and that this quality will distinguish individuals' Self-Concept Clarity, self-rated effort, and affective experiences of their own story telling – an argument discussed in greater depth in *Specific Aim III*.

The capability of storytelling about one's life or *Narrative Identity* is now a well-studied area of identity development. Narrative Identity has been identified as a part of adaptive human personality. In fact, it has also been used as a source of personality functioning information. Cruitt, Boudreaux, King, Oltmanns, and Oltmanns (2018), assessed

levels of personality functioning specifically using video recorded life story interviews. Techniques that potentially assist in developing such an identity have been used as a therapeutic intervention (e.g. Singer et al, 2013; Adler et al 2012). Research has also started to explore the role of narrative structure in an individual's mental health, and in the differences across mental health outcomes and progress in psychotherapy (e.g. Adler, et al 2015a). In this longitudinal study of late to midlife adults, the relationship between variability in Narrative Identity and trajectories of mental health over several years was assessed. Core scenes from 89 adults' life stories were coded for narrative themes. Participants' mental health and physical health were assessed concurrently with narratives and annually for 4 years afterwards.

Concurrent analyses in the Adler, et al. (2015a) paper indicated that the themes of Agency, redemption, and contamination were significantly associated with mental health. Longitudinal analyses indicated that the same three themes were significantly associated with participants' trajectories of mental health over the course of four years, with Agency and redemption scenes being positively associated, and contamination being negatively associated with mental health outcomes. The authors also noted that narratives of challenging experiences may be central to this pattern of results and conducted a second longitudinal study that included a sample of 27 late-mid-life adults who received a major physical illness diagnosis between the baseline assessment and 6 months later and a matched sample of 27 healthy controls. Participants' mental health and physical health were assessed every 6 months for 2 years. In this study, the themes of Agency, Communion, redemption, and contamination in participants' life narratives collected at baseline (before any participant became sick) were significantly associated with mental health in the group of participants who went on to receive a medical diagnosis, but not in the control group. The authors

interpret these results as indication that the way an individual constructs personal narratives may impact his or her trajectory of mental health over time.

One productive group that has extensively studied Narrative Identity is that of McAdams (e.g., McAdams, 1995; McAdams & McClean, 2013). From their perspective, Narrative Identity is a distinct element of human personality, with the construct described as one level of a three-level framework of personality: *Level I*: Traits, or dispositional signature of the individual, *Level II*: Personal Concerns (personality descriptions that evoke personal strivings) and *Level III*: Life Story frameworks and constructs uniquely relevant to adulthood (i.e., Narrative Identity). McAdams' distinction between *Level I* and *Level III* in this framework provides a focal point for the current investigation, as it parallels the AMPD with a model of healthy personality that distinguishes traits of personality (i.e., *Criterion B*) from an ability to organize and structure a consistent representation of the self that aids the individual in adaptive functioning (i.e., *Criterion A*).

In a recent paper by McLean and colleagues (2019), the authors reiterate the McAdams (1995) and McAdams and Pals (2006) claims that Narrative Identity is distinct from personality traits, and they support their argument by demonstrating positive associations between Narrative Identity variables and personality traits. The authors concede that it is often difficult to study the psychometric properties of narrative variables because of the variations in methodology. Nevertheless, questions of Narrative Identity definitions persist.

In an important contribution to narrative literature, Dunlop (2017) proposed a conceptualization of the structure of Narrative, called the Narrative Identity Structure Model (NISM) which is consistent with the model of two dimensions (viz. internal structure and social expression) to a person's Narrative Identity. The NISM, according to Dunlop, is a highly contextualized conceptual model of the storied self. In this conceptualization, the

narrator has numerous life stories, which correspond to a recurrent context, or social role relevant to the individual. In this model, there is a generalized life story, and contextualized life stories relate to “mutually constituted relations” (p. 153) with the generalized life story, which works to establish a sense of differentiation and continuity across, rather than within, contexts. Knowing then how individuals interpret and respond to context is another important individual difference factor, as is their generalized life story. According to the NISM this is the individual’s reference point for developing the smaller life-stories.

Various authors (e.g. Singer et al, 2013; Adler et al 2012; McAdams 1995, 2011; McAdams and McClean, 2013; McAdams & Pals, 2006) discuss a “Conceptual self” that represents abstract categories of the self that can exist without specific grounding in autobiographical knowledge units or episodic memories. This is interesting, because the role of the specific grounding (connection to particular events and knowledge about the self) has not yet been well understood. Helping individuals develop this framework is arguably an intervention in and of itself, producing structure and freedom to construct an abstract picture of the self. More research is needed to distinguish the ability to coherently narrate one’s life story from other individual differences like personality traits, emotional understanding or intelligence and interpersonal connection.

The extent to which a person can cohere the self to their experiences seems to be of particular importance in recent conversations about personality functioning. As discussed above, identity researchers (e.g. Singer et al, 2013; Adler et al 2012; McAdams 1995, 2011; McAdams and McClean, 2013; McAdams & Pals, 2006) have explored the conceptual self framework as one foundation for the development of identity, which is a self-concept that is not necessarily integrated with experiences. In contrast, Narrative Identity tends to be measured by the advancement from conceptual self to a self in motion, or into stories that incorporate the conceptual self with the events that a person has experienced.

Coherence, defined as “the degree to which the narrator situates the story in a specific context, ...follows a temporal sequence of goal-oriented actions that are culturally recognized, the emotions are clearly expressed in support of the point of the narrative, and narrative is integrated into larger life themes and meanings” (p. 521, Adler, et al 2017) has been suggested as a primary adaptive characteristic of narrative (Baerger & McAdams, 1999). This is also supported by the frequency at which it is studied. A longstanding literature of the self is grounded in the individual’s object relations (e.g. Piaget, 1950; Erikson, 1960; Freud, 1931; Fairbairn, 1944) which necessarily includes the individual’s ability or inability to relate to wanted others (interpersonal functioning) and their ability to process, communicate and explain the self (Self-functioning).

Narrative Identity is an interesting analogue to *Criterion A* because a) it is most commonly referenced from a non-clinical frame (therefore can be observed in a non-clinical population) but b) it is also expected to be impaired in a clinical population because it reflects capacities of self and interpersonal functioning through evidence of coherence (Self-Concept Clarity, for example), themes of Communion (interpersonal functioning) and emotion regulation ability (e.g. redemptive themes vs. themes of contamination) and Agency.

Here, we aim to add to the literature with evidence of distinctions between *Criterion A* and *Criterion B*, with the prediction that *Criterion A* will be distinctly related to Narrative Identity quality, in support of the hypothesis that Narrative Identity quality is related to this critical aspect of personality *functioning* (i.e., *Criterion A*), versus *traits* (i.e., *Criterion B*). In *Aim II*, we turn to efforts to refine measurement of the “quality”, or healthiness, of Narrative Identity indicators.

1.3. Specific Aim III: Impact of Narrative Activity on Affective Response and Self-Concept Clarity

Measuring the valence of subjective reaction to narrative activity may have diagnostic and other clinical implications because it may point to factors that distinguish people who “do well with” narrative interventions, from those who are more likely to find such interventions as difficult, or aversive. In addition, investigations are only just beginning to measure the impact of narrative activity in terms of clarifying self-concept and aiding in the consolidation of identity. The current study adds to this effort by examining the impact of narrative activity upon emotional state and self-structure, particularly as related to personality functioning status. In theory, personality impairment might influence the experience of Difficulty in completing the narrative activity task, as people are likely to fall along a spectrum of abilities to narrate (Self-functioning) and to communicate that conceptualization to others (Interpersonal-functioning). Thus, the observed affective reactions of those experiencing their own story-telling as difficult may be more negative.

There is evidence to suggest that in a non-clinical sample, the frame of different self-stories seems to influence an individual’s response to them. Pasupathi and colleagues (2015) collected 84 participants’ responses to prompts for 6 narratives about experiences where they felt harmed by someone else, and 6 narratives about instances where they were the perpetrators of harm. The narratives were coded for the extent of exploration, growth, damage conclusions and resolution. Interestingly, damage conclusions were observed more frequently in victim narratives and growth conclusions more frequently in perpetrator narratives.

Pasupathi and colleagues (2015) observed similarities in the predictive properties of the type of experience (victim or perpetrator) and the way the experience was narrated (references to damage conclusions and resolution), in predicting *emotion* (measured by rated

anger, fear, sadness, disgust, guilt, and shame that the event elicited in participants on 7-point Likert scales (1 = not at all, 7 = very)) and *identity* (measured by participant ratings of the extent to which the event they described was central to their identity on a 7-point Likert scale from 1 (not central at all) to 7 (completely central)). These emotion and identity associations were also related to well-being (measured by a composite score of aggregated and standardized scales measuring satisfaction with life, self-compassion, forgiveness, and well-being), with trends toward growth in narrative responses and higher well-being, but only when the participants rated the story as being at least marginally central to their identity. It is the focus of this Aim to determine the impact of narrative activity, as typically implemented in research studies, upon the emotions and self-concept of the participant.

1.3.1. Narrative and Affective Response

It is theorized in *Aim II* that self and interpersonal problems described in DSM 5 *Criterion A* may be related to individual capability in the way of Narrative Identity. Recent reports (e.g. Holm & Thomsen, 2018) suggest that life story coherence is impacted by an individual's self-event connection valence, or the perception of a positive or negative connection between an event and the self. With specific requests for emotional tone ratings for each chapter produced, Holm and Thomsen (2018) also asked participants to identify the emotional quality of self-event connections made in relation to each chapter on 7-point scales ranging from 1: not at all to 7: very much. They found that higher ratings of positive and lower ratings of negative self-event connections in life stories were related to fewer symptoms of psychopathology. This is a finding that makes sense, as Narrative Identity is expected to reflect the individual's beliefs about the self (e.g. McAdams, 1995; McAdams & Pals, 2006), and there are well established connections between self-esteem and psychopathology (i.e. that low self-esteem increases the probability of psychopathology; e.g. Zeigler-Hill, 2011).

One question that has not been well addressed in the literature is the emotional impact of simply attempting the task of narrative. Does personality impairment result in greater negative affect after completing such a task? One way to test this would be to use similar emotional tone rating scales with narrative tasks, and to compare healthy narrators to less healthy narrators while noting individual's scores on a measure of personality functioning.

Discussion so far has included much information about personality functioning, and this section of the paper aims to consider the impact of narrative on the individual. In developing this evidence base for narrative activity *impact*, it is important to continue the conversation about the function of narrative. McAdams' (1995) paper states that "good description is necessary for good explanation" (p. 387). One way to think about Narrative Identity is as an explanation of the self. By this definition alone, we split the activity into a self component and an interpersonal component, as the individual may have an internal explanation of self, as well as an explanation to offer to others about who they might be.

Defining the functional social, as well as internal aspects of narrative discussed in *Specific Aims I and II* may be a helpful step in understanding individuals' responses to it, because one theory being developed here is that known impairment influences response. That is, people who are/or who feel less competent at an activity may avoid that activity. Evidence of this phenomenon can be found in Puca and Schmalt's, (1999) investigation of the relationship between task enjoyment, achievement motives and performance. In their study, participants completed measures of achievement motivation (the Multi-Motive-Grid, MMG, Schmalt & Sokolowski, 1996), which returns a Hope for success and Fear of failure score, and they rated their level of enjoyment on a given task as well as their perceived competence. The authors classed those higher in hope for success scores as achievement oriented and those higher in fear of failure as avoidance oriented. Group differences were significant in this study for endorsed task enjoyment, and the feeling of knowing the right thing to do

(competence), with those higher in approach orientation being more likely to endorse enjoying the task *and* knowing what to do.

This has implications in a conversation about the impact of narrative tasks, because if individuals avoid the task because they find it aversive, they may subsequently be less able to construct well-formed narratives. Theoretically, people who are experiencing impairment in self and interpersonal functioning would find the task of telling the story of one's life more difficult (e.g. Adler et al, 2012), but would they find it more aversive?

Despite limited evidence suggesting that narrating one's experience is particularly difficult for those displaying functional impairment and symptoms of pathological personality, this makes conceptual sense, because Narrative Identity variables are often descriptive of these adaptive qualities (e.g. Adler, et al., 2017). There is an ever growing literature on the function of narrative in psychotherapy (e.g. Lieblich, McAdams & Josselson, 2004), and a less developed literature specifically measuring outcomes after narrative tasks in people experiencing personality pathology (e.g. Pabst, et al., 2014; Adler, Wagner & McAdams, 2007; Adler, et al., 2012; Steuwe et al., 2016).

From an extensive literature and group of contributors, Lieblich and colleagues (2004) trace effective therapeutic interventions as involving a co-construction of healing narratives in the face of personal, moral, and social adversity. Mishara (1995) describes this work as a changed relationship of the individual with his or her own past (painful) experience via "a narrative act" (p. 186). Lieblich and colleagues suggest that the ways that therapists and clients negotiate narrative conflict and complexity is an important area of study, particularly in terms of highlighting the types of stories that animate, change through, and as a result of, the therapy. This paper seems to allude to the idea that a person can independently do narrative work, but also that there is an interesting interplay involved in developing healthy narratives that includes the individual's internal experience of self, and the interpersonal

element of communicating with others. Here, the consideration of healthy versus problematic responses to narrative activity becomes an important one.

An example of an attempt to harness the impact of narrative activity as an intervention can be found in Narrative Exposure Therapy (NET, Schauer, Elbert, & Neuner, 2012), which is an evidence-based treatment for survivors of multiple or continued traumatic stressors. In this treatment, the therapist asks participants to place the most important events in their lives into rough chronological order, with symbols placed along the timeline of both the especially positive and those adverse or traumatic events the client has experienced. One proposed utility of this activity is being able to situate negative emotional experiences into specific moments in time as a means of reducing the effect of negative emotional reactions to specific events over time. Making the connection that good and bad events have occurred at specific points in the past is thought to be helpful for people who may be reexperiencing the trauma of an aversive event.

In a study by Pabst, et al., (2014), NET was used in a population meeting criteria for a diagnosis of BPD with comorbid post traumatic stress disorder (PTSD). In an approximately matched sample of women (N = 11 per treatment condition), participants received either NET, or a treatment as usual condition (described by the authors as “Treatment by Experts” (TBE, p. 110) for BPD). Both treatments reduced all indicated symptoms (i.e. of PTSD, BPD, depression and dissociation), leading the authors to conclude that it is necessary to conduct further study of narrative interventions for patients experiencing personality disorder, and particularly those experiencing BPD. Another study (Steuwe et al., 2016) more specifically addressed the issue of feasibility of narrative therapy in a similar sample (N = 11, 1 male, 10 female) of patients with comorbid PTSD and BPD. They found low dropout rates (90.9% of patients completed the treatment, with only one patient rejecting the treatment), and low symptom severity in terms of self-harming behaviors, meaning that the treatment itself did

not seem to increase patient distress to a clinically significant level. Results also showed reductions in symptoms of PTSD, BPD, depression, dissociation and quality of life.

These studies point towards the viability of narrative as a potentially impactful and safe intervention, but they do not explicitly discuss what these experiences are like for the individuals in treatment. From a treatment perspective, one benefit to further study of the impact of narrative activity on people demonstrating characteristics of functional impairment versus those who do not display these characteristics is that the clinician can be informed of group level differences in affective response as well as the predicted impact that using such an intervention has on the individual's self-concept. What types of responses to narrative are thought to be healthy, and how might different types of individuals respond to the task?

One theory, drawing on previous discussions (e.g. Kessinger, 2009) of the important role of affect in memory, is that affective information gleaned from participants specifically responding to narrative prompts may give additional information about people's internal experiences while creating narratives. It is of particular interest to consider how instructions to complete a narrative task parallel the guided narration that an individual produces in therapy. This guidance can be seen as an aid to emotion regulation, while also working towards explicitly identifying those adaptive, healthy themes of Narrative Identity, an assertion explored more in *Specific Aim IV*. In terms of measuring impact, without a guided and regulating instruction on how to complete the task, differences between individuals given their level of personality functioning is expected.

The assertion that the emotional response to narrative activity is indicative of the efficiency and ease by which the individual develops a narrative script is an interesting area for further study. When given an autobiographical prompt that is likely to evoke negative affect, will we observe greater negative affect and higher endorsements of Difficulty in individuals who demonstrate impairment on the LPFS? There is some evidence to suggest

this (e.g. Lowmaster, 2013; Adler et al., 2012). In her study distinguishing high Borderline (BOR) trait scorers from low BOR trait scorers, Lowmaster found that high BOR scorers rated a task involving the production of words to describe the self as more difficult than low BOR scorers. She concluded that individuals with high borderline personality features self-report significant Difficulty generating words to describe their true self, and they also perceive their true-self knowledge to be less coherent than individuals with low borderline features.

In consideration of the role of affect in self-concept and Self-direction, less healthy and robust Narrative Identity may predict poorer affect regulation (e.g. Adler et al. 2012). Adler and colleagues distinguish the role of affect in coherent story-telling as the extent to which the narrative uses emotion language to make an evaluative point. In their matched pairs sample of people identified as experiencing symptoms of BPD or not experiencing BPD (N=20 per group), the authors found significant, negative associations between BPD status and several narrative variables (i.e. Agency, Communion fulfilment and coherence).

Taken together, although theory suggests that there is an underlying identity disturbance that makes narrative tasks more difficult for people experiencing symptoms of personality disorder, we acknowledge that the literature is sparse on discussions of the impact of said activity on the individual, beyond composite well-being scores which tend to be about comorbid symptoms (e.g. of depression or subjective impressions of health). There is less discussion about the individual's changing abilities to narrate their experiences, nor of their perceived ability to do so initially. Several questions come to the fore: Is a perception of competence to perform the task important? Might self-perceived competence be related to measures of Self-Concept Clarity? Can affective impact change with rehearsal? We explore these questions further in the following sections.

1.3.2. Self-Concept Clarity and Narrative

Campbell (1990) presents the idea of Self-Concept Clarity (SCC) as an accurate and clear cognitive schema that organizes abstract and concrete memories about the self which controls the processing of self-relevant information. In terms of understanding this construct, Campbell traces her steps from self-esteem literature. She suggests that the construct of self “is explicitly viewed ...as having both an evaluative component and a knowledge component.” (p.539). In the development of the SCC scale, Campbell and colleagues (1996) define SCC as “the extent to which self beliefs are clearly and confidently defined, internally consistent and stable.” (p. 141). The authors distinguish between knowledge components which involve beliefs about specific attributes (such as personality traits and physical characteristics), and evaluative components which include the positivity of specific self-beliefs (a global self-evaluation in response to viewing the self as an object in the environment).

In order to receive higher scores on the SCC scale, an individual would be demonstrating both knowledge components and evaluative components. Within this study, this evaluative component is thought to have an affective valence, which previous research has demonstrated as being associated with the stability of self via SCC correlations with self-esteem, (e.g. Campbell et al., 1996; Styla, 2015) and as having a negative association with emotion dysregulation, as observed in people with non-suicidal self-injurious (NSSI) tendencies (e.g. Lear & Pepper, 2016).

Brockner (1984) is credited with advancing the idea of low self-esteem (SE) *plasticity* and found that people with lower self-esteem are generally more susceptible to the effects of self-relevant social cues than are people with higher SE. What Brockner found was that while people with higher self-esteem only accept or are affected by external cues that are consistent with their self-concept (positive cues), people with lower SE appear to be susceptible to a

broad range of self-relevant stimuli. This offers a clue in terms of influencers on the mechanism of the self, but it does not necessarily map a clear path from a stable, healthy sense, or knowledge of self to managed affect about the stories of self.

Using a SCC measure along with affective measures serves two purposes within the current investigation. First, it can be useful for understanding the individual's endorsed knowledge of self at baseline. However, it can also be used to gauge the impact that engaging a narrative prompt can have upon these features of self-concept, providing further exploration of self-knowledge and self-regulation in story-telling.

Given that psychotherapy, as noted above, often involves substantial narratives around identity, it might be expected that treatment would have such an impact upon clarity of self-concept. Styla (2015) provides such a study of SCC change over the course of psychotherapy that specifically looked at both healthy personality structure, and those with symptoms of personality disorder. In the inpatient sample of 85 patients receiving group psychotherapy, participants completed the Self-Concept Clarity Scale (SCCS), personality measures and symptom checklists at the beginning and end of psychotherapy. SCC was rated every two weeks during psychotherapy by participants. Styla found that among the relatively healthiest group of patients, a stable SCC increase was related to positive treatment outcome, while more disturbed patients appeared to benefit most from greater fluctuations in SCC change. These findings support the idea that for different personality dispositions there will be differences in adaptive response – that is, either a monotonic increase or transient destabilization of SCC could be a sign of a good treatment prognosis. Knowing the characteristics of each personality disposition, then, is an important progression in treatment planning and development.

In other words, here we return to considerations about functional impairment in self-stories in terms of affective coherence. In theory, those experiencing impairment of the self

will have lower Self-Concept Clarity at baseline (measured by the SCC scale), are more likely to struggle with a narrative task (measured by an endorsement of Difficulty), and will be less able to regulate the affect in their stories (measured by the extent and nature of affective language within the story, and ratings of emotional tone), as well as in the emotional response to their self-stories (measured by affective ratings after the task). Another possibility is that affective responses to providing the story will be predictive of SCC change. That is, the extent to which a person is able to regulate the emotional response to telling their story may be a predictor of potential improvement in Self-Concept Clarity. As such, those with greater personality pathology are hypothesized to have greater affective responses (particularly negative affect) to their stories, and smaller changes in Self-Concept Clarity. The individual's self-assessment of competence to define the self is another potential predictor of narrative impact. People who feel that they know themselves less are theoretically more likely to rate an activity where they must describe this self as more difficult and possibly more emotionally negative.

This brings us to the final aim of the current work. The Narrative Identity literature concedes that stories change over time and context (e.g. Mishler, 2004), and that there are important distinctions between *flexibility*, i.e. the capability to revise knowledge of the self in light of new information, and *accuracy*, as in an evaluation of self that is neither too self-critical nor too grandiose (Singer, et al., 2012). An intervention that initiates this movement of story by specifically instructing individuals on how to re-tell a life story in a more adaptive way adds to the literature because it aims to help those who are less flexible and accurate to become more so.

1.4. Specific Aim IV: Can Narrative Identity Be Positively Impacted by Re-Storying?

Mishler (2004) acknowledges that people “tell and retell their stories in variant ways” (p. 101), and that people do this Re-storying of their lives to suit the occasion, audience and

reason for the retelling. Taking an empirical approach to observing a re-telling of life stories works toward Mishler's charge of identifying the factors that affect how individuals tell their stories "on each next time" (p. 103). There is some evidence to suggest that "Re-storying" one's experience can be adaptive, and techniques that potentially assist in developing such an identity have been used as a therapeutic intervention (e.g. Adler et al 2012).

Re-storying has been described as a necessary aspect of psychotherapy (e.g. Adler et al, 2015), as an important recovery tool after trauma (e.g. Grant, Leigh-Phippard & Short, 2015, and Pasupathi et al, 2015), and as an adaptive response to serious mental illness (Carless & Douglas, 2008). Building on *Aim III*, *Aim IV* explores the intervention potential of Re-storying (an additional narrative manipulation), in terms of narrative quality and will consider the relationship between *Criterion A* characteristics of self and interpersonal functioning and the nature and magnitude of changes in re-told life story qualities. Does the type of instruction to complete a Re-storying task influence the outcome of the activity? Do individual differences explain differences in response to the task?

There is some evidence to suggest that individuals' disposition and their perceptions of the self can impact that person's ability to frame or "re-story" their experiences. In the Carless and Douglas (2008) article, the authors explore the narratives of men (N=11) experiencing serious mental health problems. With the assumption that retelling one's life story in an interview with an experimenter is similar to the act of telling one's story in a therapy session, their goal was to observe unsolicited instances of re-storied selves. They found that the presence of an action narrative about "going places and doing stuff" (p. 583), an achievement narrative about accomplishment through effort, skill or courage; or a relationship narrative of shared experiences to talk about as well as opportunities to talk about those experiences was oftentimes an alternative narrative response to the also observed illness narrative.

Careless and Douglas (2008) suggest that individuals experiencing mental health problems experience threats to identity and the sense of self when their personal story is displaced by dominant illness narratives focusing on deficit and dysfunction. The authors found that participants benefited from Re-storying their life experiences in a more positive way which facilitates the reconstruction of a meaningful identity and sense of self. In their study, the authors distinguished those participants who included the positive reframes in re-told experiences from those who did not, but they did not manipulate this activity. We believe that this Re-storying exercise can be used as an intervention because it has the potential to promote Self-direction, especially if those adaptive Narrative Identity themes of Agency, Communion and affect-regulation are pointed out to individuals as important elements to include in their narrative responses.

Finding adaptive themes in a person's narratives and rehearsing those in conversation is thought to be a mechanism utilized in therapy (e.g. Adler, et al. 2015a & 2015b; Baerger & McAdams, 1999), with reflections and guidance from the therapist aiding in the individual's ability to externalize and possibly personify the elements of the story that they struggle to make sense of (Epston & White, 1992). This process of exploration is thought to be helpful in developing a *knowledge* (of self and other), plus *skill* (to communicate *inter-* and *intra-* personally, as well as to regulate difficult experiences) plus *tool* (to improve the two) link, described as "integrity" (p. 2; Bruner, 1991). According to Bruner, people will differ in their level of integrity on a given domain of functioning. That is, the ability to explore and process a narrative will be tied to the individual's knowledge of self, others and their inter- and intra-personal skill. Though Bruner does not spend much time discussing the demonstration of the use of tools in different people, or how people who have the tools might have acquired those tools, this discussion of the use of narrative tools seems to be important in tracing differences in impact across individuals.

Specifically targeting *Exploratory Narrative Processing*, Pals (2006) defined the term as a tool that enriches the individual's story with *richness/complexity* of narrative elaboration and *open-exploratory* versus a *closed* minimizing approaches to coping. Pals adds to this discussion of exploratory process with her study of narratives of difficult experiences in the *Mills Longitudinal Study* (Helson, 1967). In her study of 83 narratives from a sample of 52-year-old women, Pals asked participants to describe their most difficult time since college, and she compared existing data from the age 21, age 52, and follow up at age 61 assessments. Pals distinguished indicators of coherent positive resolution in four coded variables: *ending coherence*, *positive ending*, *negative ending*, and *emotional resolution*. She found that exploratory narrative processing of difficult experiences mediated the relationship between coping openness in young adulthood (age 21) and the outcome of maturity in later midlife (age 61). She also found that coherent positive resolution predicted increasing ego-resiliency between young adulthood and midlife (age 52). This adds weight to the theory that the frame of stories over time seems to impact an individual's wellbeing in several spheres, and that individuals differ in the way they tell their stories. With such evidence in hand, we explore interventions that specifically instruct individuals to tell their stories in ways that promote healthy narrative, in hopes of tracing these differences in impact and response to narrative.

Hermans' (1992) Self-confrontation procedure asks individuals to recount, for a second time, important life stories. Hermans states that restorying is an opportunity for people to play an "active and responsible role in the process of investigating their own development." (p. 361). He considers the positioning of an historical event, understood only through its context in time and space, as being a central element of narrative Re-storying. In terms of identifying sources of differences between individuals, one interesting distinction he makes is the contrast between responses to expected and unexpected life events. His assertion that the individual's process of self-reflection includes a valuation, or active process of

meaning construction, is similar to Campbell's (1990) theories of the self involving a knowledge component and a self evaluation component. One theory is that the evaluation a person makes about the self will influence a) their ability to tell a self story and b) the stories they actually tell (i.e. narrative quality).

Drawing on the work of Cohler, (1982) Hermans (1992) considers three life transitions that are particularly likely to include life-story disruption and subsequent revision, including early to middle childhood, childhood to adolescence, and young adulthood to mid-life. Hermans notes that narrative is inherently communicative. People in a transition phase of life are actively facing disruption in the sense that their life transition is likely to involve meeting new people and being separated from attachment figures and friends. In his case study, Hermans analysed the affective and motivational response of a 45 year old man who experienced a difficult life event (failure in his career). Inclusion of the individual as a co-investigator is a promising intervention according to Hermans because it provides the opportunity to retell a story in context. Placing events in the story under evaluative scrutiny within the bounds of time (past, present and future) is thought to enhance the individual's mastery of themselves by demonstrating the ways that stories, and reactions to them, change.

People in a transition phase of life are also likely to be developing revisions to their stories based on the reception from the current environment and their own changing sense of self (e.g. Pals, 2006; Hermans, 1992). Hermans states "Storytelling always implies an actual or imagined listener" and that "the sheer presence of this listener is a co-construing factor in the content and structure of the story" (1992, p. 371). The study of change in interpretation and evaluation over time is another important consideration in terms of understanding the mechanisms of healthy Narrative Identity development.

Lyddon, Yowell and Hermans (2006) describe the Self-Confrontation Method in greater detail, identifying three general phases: a *valuation elicitation*, where the individual

produces valuations related to their past, present, and future. Second is an *affective rating* phase, where the client rates their experience of 16 affect terms in relation to the valuations already made and these affective terms are clustered into a *Self-enhancement* block (self-esteem, strength, self-confidence and pride) and a *Union with others* block (caring, love, tenderness and intimacy) as well as *Positive Affect* (joy, happiness, enjoyment and trust) and *Negative Affect* (worry, unhappiness, despondency and disappointment) blocks. These ratings are made on a six point scale from not at all to very much. Finally, *evaluation and integration* involves comparison of the individual's ratings on these four indices for a particular event, with two possible strategies.

In one confrontation design, the individual is asked to re-rate each index (i.e. give new ratings). In another, the individual is asked to re-evaluate the previously given ratings. Lyddon and colleagues (2006) interpret significant changes in the indices as a change in the meaning of that valuation for the individual. They suggest that this change is as a result of assessing valuations across multiple administrations, growing insight into the dominance of certain motives (self enhancement, contact with others, positive affect, or negative affect) and the exploration of the generalization of particular indices across multiple time dimensions enacted in therapy. This model seems to interpret a re-telling of the self-story with a parallel conceptualization to Campbell's (1990) assertions of knowledge and evaluation components to the self, along with AMPD components of Self and interpersonal functioning. Adding Bruner's (1991) discussion of the *knowledge-plus skill-plus tool* integrity framework, we are interested in tracing this integrity. To map sources of individual differences, we can now distinguish people first by their knowledge of self, their interpersonal functioning, and then by their use of tools.

Consideration of the individual's response to self, and to audience takes us back to earlier discussions from *Specific Aims I* and *II* of self and interpersonal functioning as the

linked system at work in a healthy Narrative Identity. *Specific Aim III* sets the stage for measuring individual differences to performing a narrative activity task with respect to affective response, as well as Self-Concept Clarity changes, and *Specific Aim IV* then further considers the use of narrative as an intervention, with particular interest in the role of an intentional instruction to re-story a scene that has already been described.

Michler (2004) notes that it is valuable to know the “story behind the stories,” (p. 118) because this aids in our understanding of why two tellings of the same event may differ by intention or by affect. The single account of a story may or may not capture what Hermans, Kempen and VanLoon (1992) describe as multiple “I’s” and “me’s,” or the various (potentially conflicting, Mishler, 1999) identities of an individual. According to the authors, this flexibility allows for adaptive movement through space and time, and the self can imaginatively occupy a number of positions that permit mutual dialogical relations (Hermans, Kempen & VanLoon, 1992).

In the broad conversation about the role of narrative as an intervention, Re-storying provides an opportunity to see the story in motion, as the storyteller will give two samples of one scene. The use of narrative in a controlled study also has the benefit of tracing this movement over multiple tellings with the opportunity to collect information about reactions from the bottom up (task impact on the person) and the top down (person reaction to the task) to further develop our understanding of Narrative Identity. In tracing impact differences across individuals, having a manipulation that provides the proposed tools required to produce healthy narratives is another important part of the study design. While some people may demonstrate the use of these tools organically, others may benefit from acquisition of the tool(s) as an intervention. Here, we anticipate that the use of a re-telling and re-evaluation instruction will add to our understanding of narrative activity as an intervention. Giving an individual the instruction to tell their story with particular attention to adaptive narrative

qualities as well as having them evaluate their own story for these qualities is hypothesized to produce improved Self-Concept Clarity, particularly in those manifesting identity issues (i.e., poorer personality functioning).

1.4.1. Summary: Exploring Mechanisms of Personality and Identity Through Narrative

So, what is a “healthy” capacity to construct self-narratives, and can we measure it? Personality pathology literature provides the current work with a discussion of a global measure of dysfunction, distinct from personality traits, that underlies and predicts the occurrence of personality pathology. Narrative Identity literature suggests that the capacity to construct coherent narratives about the self reflects a distinct element of healthy personality structure. As such, the following study hypotheses were offered as derived from the Specific Aims discussed above:

Hypothesis I: There is a general underlying developmental quality to various characteristics of Narrative data. We anticipate a large first “factor” on which the many of the traditionally scored characteristics of narrative production (list in Table 1, p. 3-4) will load heavily. **Hypothesis II:** Characteristics of Narrative Identity were predicted to be related to a critical aspect of personality *functioning* (i.e., DSM-5 AMPD *Criterion A*) above and beyond any relationship to personality *traits* (i.e., *Criterion B*). **Hypothesis III:** In evaluating the impact of narrative tasks, it was predicted that people who are experiencing personality impairment would experience greater negative affect and difficulty in completing the task than those not flagged as experiencing impairment. They should also be less likely to experience increases in Self-Concept Clarity upon completing a narrative task than those not flagged as experiencing impairment. **Hypothesis IV:** People who are experiencing personality impairment were predicted to be more likely to experience enhanced Self-Concept Clarity upon completing a restructured narrative task that instructs participants to focus upon “healthy” aspects of narrative activity.

2. METHOD

2.1. Participants

Study participants were recruited from the Texas A&M University (TAMU) Psychology subject pool will be utilized for recruitment. The demographic breakdown of the sample is as follows: there was a total of 168 participants. They were self-identified as male (N = 51, 30.4%) and female (N = 117 69.6%), with an ethnic origin of African American (N = 6, 3.6%), Hispanic/Latinx (N = 31, 18.5%), Caucasian/White (N = 105, 62.5%), Asian (N = 19, 11.3%), Native American/Pacific Islander (N = 2, 1.2%) and Mixed/Bi-racial (N = 5, 3%). The mean age of the sample was 18.66 (SD = 0.92 years). Participants reported being from similar socioeconomic background. We limited participants to people above 18 years who were proficient at English language.

2.2. Apparatus and Materials

The study used the survey platform *Qualtrics*® with questionnaires and prompts being uploaded to a single study file on the platform. The study was conducted in a computer lab, and participants complete the protocol by sitting at a cubicle with a computer. Up to six participants completed the activity at once. The study included a number of measures of personality: to measure pathological personality traits (AMPD Criterion B), we use the PID-5 (Krueger, Derringer, Markon, Watson, & Skodol, 2012), and to measure normal personality traits, the BFI-2 (Soto & John, 2017). To measure impairment in personality functioning (AMPD Criterion A), we use the LPFS-SR (Morey, 2016). To measure the individual's Self-Concept Clarity we use Campbell, et al.'s (1996) SCC scale. To measure affect, we use the Self Assessment Manikin (SAM; Lang, 1980). To collect Narrative Identity data, the study employed four Narrative Prompts (McAdams, 2008), discussed in the Procedures section (p.43-45). Participant ratings of the ease/Difficulty of narrative tasks were also collected. Scales are described in greater detail below.

2.2.1. The Personality Inventory for DSM-5 (PID-5, Krueger et al. 2012)

The PID-5 is a 220 item self-rated personality trait assessment scale for adults age 18 and older. It assesses 25 personality trait facets including Anhedonia, Anxiousness, Attention Seeking, Callousness, Deceitfulness, Depressivity, Distractibility, Eccentricity, Emotional Lability, Grandiosity, Hostility, Impulsivity, Intimacy Avoidance, Irresponsibility, Manipulativeness, Perceptual Dysregulation, Perseveration, Restricted Affectivity, Rigid Perfectionism, Risk Taking, Separation Insecurity, Submissiveness, Suspiciousness, Unusual Beliefs and Experiences, and Withdrawal, with each trait facet consisting of 4 to 14 items. Specific triplets of facets (groups of three) can be combined to yield indices of the five broader trait domains of Negative Affect, Detachment, Antagonism, Disinhibition, and Psychoticism. Using estimated target-rotation Exploratory Factor Analysis (EFA), PID-5 factor loadings show similarities across selected and representative samples for each of the domains. In the Krueger and colleagues (2012) sample for negative affect, the congruence coefficient was 0.91; detachment = 0.96; antagonism = 0.97; disinhibition = 0.93; and psychoticism = 0.89. The current investigation returned similarly reliable results, with alphas for the five broad trait domains with α ranging from 0.87 to 0.93.

2.2.2. The Level of Personality Functioning Scale-Self Report (LPFS-SR, Morey, 2016)

An 80 item self-rated personality functioning assessment scale for adults age 18 and older. It assesses four interrelated core functions of personality, including Identity, Self-direction, (Self-functioning), Empathy, and Intimacy (Interpersonal functioning), with each of these subcomponent scales consisting of 16 to 23 items. The four subcomponent scores are summed to yield an index of the level of severity of impairment in general personality functioning. Within each domain, a comprehensive description is given for each criterion. Hopwood, Good and Morey (2018) report internal consistencies (alphas) for participants' first administration of the LPFS-SR across the three samples as 0.95 for the total score, 0.92

and 0.91 for self and interpersonal domains, and 0.86, 0.86, 0.80, and 0.86 for identity, Self-direction, intimacy, and empathy components, respectively. The current study also had similarly reliable results, with α ranges from 0.66 (Empathy) to 0.88 (Identity); Coefficient alpha internal consistency for the LPFS-SR Total score was $\alpha = 0.84$.

2.2.3. Self-Concept Clarity (SCC, Campbell et al., 1996)

A 12-item scale which measures the degree to which individuals feel that they have a strong and clear sense of who they are (e.g. “In general, I have a clear sense of who and what I am.”; 1 = strongly disagree, 7 = strongly agree). Lowmaster, (2013) reported good internal consistency on SCC; Cronbach's coefficient $\alpha = 0.93$; $M = 45.04$, $SD = 7.7$ in her control group, with higher scores being indicative of greater Self-Concept Clarity. In the current study, internal consistency for three administrations of the SCC was good. Alphas, means and standard deviations are reported in Table 2 below.

Table 2 SCC Internal Consistency and Descriptive Statistics

Time	Cronbach's coefficient α	Mean	Standard Deviation
SCC1	0.86	38.58	9.61
SCC2	0.88	41.55	10.66
SCC3	0.90	42.33	11.22

*SCC1-3 Represents administration of the Self-Concept Clarity scale at times 1-3.

2.2.4. The Self Assessment Manikin (SAM, Bradley and Lang, 1994)

A non-verbal pictorial assessment technique that directly measures the pleasure, arousal, and dominance associated with a person’s emotional state; it has been widely used to measure affective reaction to a wide variety of stimuli. Participants will be asked to rate the extent to which they feel Pleasure, Arousal and Dominance at a specific point in time on a nine-point scale. Presented SAM images are shown in Figure 2 below.

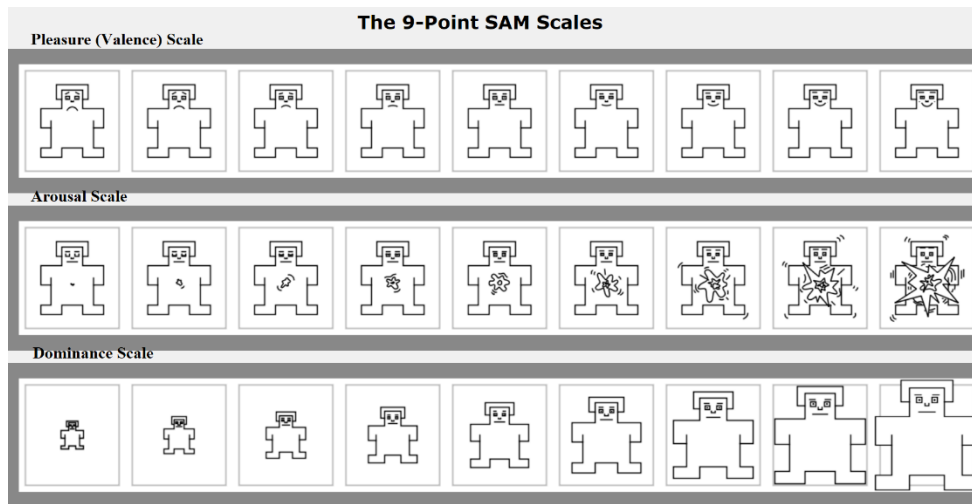


Figure 2 9-Point SAM Scales for Pleasure, Arousal and Dominance Ratings

In their comparison of SAM responses to 21 pictured scenes/objects, Bradley and Lang (1994) found convergent validity between the SAM and a popular language-based method of affect rating (the semantic differential rating system; Mehrabian & Russell, 1974), with factor analysis for the two major affective dimensions (*pleasure* and *arousal*) returning almost complete agreement in all comparisons involving the semantic differential factor scores and the ratings resulting from either of the SAM administration formats. Semantic differential pleasure scores were correlated 0.97 and 0.96 with pencil-and-paper SAM and computer SAM pleasure dimensions, respectively.

There was less agreement between scales on the *dominance* dimension (nonsignificant correlations of 0.23 and 0.18 between the semantic differential factor and the paper-and-pencil SAM or computer SAM, respectively) and the authors attribute the divergence to contextual disagreement (i.e. whether the participant rated their own dominance in a moment corresponding to a presented image, versus the dominance of the presented image). Because of these disputes, SAM Dominance was not examined in these analyses. Here, a computerized version of the SAM was included, as described by Suk (2006). Internal

consistency ranges for four administrations of SAM ratings were fairly reliable, with alphas ranging from 0.57 (SAM Pleasure) to 0.84 (SAM Arousal).

2.3. Procedure

Informed consent was obtained from all participants who were given a brief introduction to the study indicating that the experiment would take place on the computer, and that no identifying information would be collected. All participants were to complete all activities (i.e. LPFS-SR, PID-5, narrative stories, SAM, Difficulty ratings and SCC). An overview of the study process is described in Table 3.

Table 3 Study Procedures

Step by Step Process:

- At the lab, up to 6 participants completed the study using individual computers in private cubicles.
 - Informed consent process on screen.
 - Participant began with personality measures (i.e. LPFS-SR & PID-5), baseline Self-Concept Clarity (SCC-1), and demographic measures.
 - Participant completed three narratives (High Point, Low Point & Turning Point, described on page 47), in randomly presented sequence.
 - Participant rated SAM Affect (described on page 40), and Difficulty (described on page 48) after each story.
 - Participant completed SCC (SCC-2) after three stories.
 - Self-Confrontation: Participant was asked to reread their Low Point story and rate it for Self-Enhancement and Union with others (described on page 49).
 - Re-story: Participant was asked to re-tell their Low Point story so that it incorporated more Self-Enhancement and Union with others.
 - Participant rated SAM Affect and Difficulty after Re-storying.
 - Participant completed a final SCC (SCC-3) after Re-storying.
 - Debrief and research credit granted.
-

2.3.1. The Life Story Interview (LSI) Model of Adult Identity

The LSI emphasizes narrative and the storied nature of human conduct. For the current study, we adapt the LSI by selecting three “Key Scenes in the Life Story:” A High Point, a Low Point, and a Turning Point. From previous literature (e.g. Adler, 2011), and the information obtained from pilot data, participants were given a minimum of five minutes per prompt (with Qualtrics® storing duration of time taken per narrative, allowing participants to continue working if they need additional time). Narratives averaged 172 words, ($SD = 53$ words). The prompts are described in greater detail in Table 4 below.

Table 4 Adapted LSI Prompts for Narrative Response

Prompt	Instruction
High Point	Please describe a scene, episode, or moment in your life that stands out as an especially positive experience. This might be the high point scene of your entire life, or else an especially happy, joyous, exciting, or wonderful moment in the story. Please describe this high point scene in detail. What happened, when and where, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so good and what the scene may say about who you are as a person.
Low Point	Thinking back over your entire life, please identify a scene that stands out as a low point, if not <i>the</i> low point in your life story. Even though this event is unpleasant, we would appreciate your providing as much detail as you can about it. What happened in the event, where and when, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so bad and what the scene may say about you or your life.
Turning Point	In looking back over your life, it may be possible to identify certain key moments that stand out as turning points -- episodes that marked an important change in you or your life story. Please identify a particular episode in your life story that you now see as a turning point in your life. If you cannot identify a key turning point that stands out clearly, please describe some event in your life wherein you went through an important change of some kind. Again, for this event please describe what happened, where and when, who was involved, and what you were thinking and feeling. Also, please say a word or two about what you think this event says about you as a person or about your life.

2.3.2. Reaction Ratings for Narrative Tasks

For each prompt, rated the level of ease or Difficulty they experienced in completing the task on an eleven-point scale; 0 being Entirely Easy and 10 being Extremely Difficult.

The Difficulty total score was the sum of each prompt Difficulty rating. Internal consistency was good across the four administrations of Difficulty ratings, with $\alpha = 0.76$.

For each prompt, the participants were also asked to rate the *emotional tone* of the story they just told in response to each prompt using SAM. The emotional tone scores were the sums of SAM responses to the three narrative prompts (High Point, Low Point, Turning Point) on *Pleasure*, and *Arousal* ratings.

2.3.3. Re-storying

In order to measure differences in response to a Re-storying task, participants were instructed to confront and re-story. They were instructed to review their previous story of a Low Point in their lives and were asked to re-tell it (a fourth Narrative prompt) with particular attention on how the second telling might impact their Self-Enhancement (self-esteem, sense of strength, self-confidence, pride), Union with others (Caring, love, tenderness and intimacy) and Affect (Positive and Negative). The Re-story instructions were as follows:

“Please read the *Low Point* you wrote about earlier, and rate it on the following qualities: the extent that your story aids in increasing self-esteem, a sense of strength, self-confidence, and pride (*Self-Enhancement*), and the extent that your story aids in increasing caring, love, tenderness and intimacy (*Union with others*). You should evaluate your story on each of these measures on a 0 (not at all) to 5 (very much so) scale.

Next, try to re-tell the story of this *Low point* in a way that would increase your ratings of *Self-Enhancement* and *Union with others* for your story--how it might have impacted you in ways that you might not have described in your earlier telling of the story. A good life story is oriented in time, follows a sequence and refers to emotions you felt and

resolutions you made after the experience.” (An adapted prompt that combines instructions from the LSI, McAdams 2008, with aspects of the self-confrontation model described in Lyddon et al. 2006)

2.3.4. Self-Confrontation Ratings

Self-esteem, a sense of strength, self-confidence, and pride (Self-Enhancement); caring, love, tenderness and intimacy (Union with others) were each rated on a 0 (not at all) to 5 (very much so) scale. Internal consistency for the measures within the current study was good: Self-Enhancement $\alpha = 0.92$, Union with others $\alpha = 0.94$.

2.3.5. Narrative Coding

Eleven variables were coded from participant responses to four prompts in the current study. Each prompt (High Point, Low Point, Turning Point and Re-story) was coded for the presence (score +1) or absence (score 0) of 11 Narrative Variables (See Table 1 above, from Adler et al 2017 for definitions). The final participant count included 166 respondents, representing 7306 unique data points (11 variables scored from 4 prompts across 166 respondents). Interrater reliability analyses were conducted on 42% of narratives (N = 70 responses, 3080 data points). Coders were trained on a separate dataset of narratives, reliability was tested, and then they coded the subset of narratives in the current study. Coders met to resolve discrepancies and to discuss difficult cases. A more detailed description of coding strategies along with example passages can be found in Appendix C, page 117. Reliability coefficients (intraclass correlations, ICCs) on the joint raters' code sheet compared to the master coder are presented in Table 5 below.

Table 5 Range of ICCs Across Four Prompts for Each of the 11 Narrative Variables

Theme Subdomain	ICCs Median, (Range)
Agency	0.68, (0.60 – 0.78)
Communion	0.52, (0.50 – 0.72)
Growth Goals	0.61, (0.54 - 0.83)
Contamination	0.68, (0.56 – 0.90)
Redemption	0.56, (0.50 – 0.84)
Positive Resolution	0.66, (0.63 – 0.95)
Accommodative Processing	0.51, (0.50 – 0.79)
Exploratory Processing	0.63, (0.52 – 0.74)
Meaning Making	0.65, (0.57 – 0.67)
Coherence	0.81, (0.70 – 0.83)
Complexity	0.73, (0.69 – 0.876)

* Binary scoring system: 1 = present, 0 = absent. Values corrected to two decimal places ICC

= Intraclass correlations.

3. RESULTS

Two participants did not complete the narrative portion of the study and were excluded from those analyses. In five cases, participants had computer problems while completing the study, and some of their data was lost. This accounts for a varying N in subsequent analyses (when the measure in question was present, their data was included, when it is not, they are excluded).

3.1. Sample Descriptive Statistics

The question of how to best represent the measurement of study variables, particularly those involving the narrative themes, was evaluated before describing relationships between variables. We evaluated different approaches to summary scores for study variables using two schemes (described in Adler et al, 2017; McLean et al, 2019). In scheme one, a total score was used that represented the sum of the three prompt scores for each coding theme. This score summarizes the aggregated amount of a given theme that an individual participant demonstrated across three provided stories (i.e. their high, low and turning point responses, summed by variable). Alternatively, scheme two involves a strategy that reflected a prompt specific value for each variable. This approach uses a code for every participant for each theme, resulting in three independent scores that are prompt specific. Associations between the total score and the specific theme codes were consistently positive and significant, with correlations ranging between $r = 0.5$ and 0.7 , with the exception of one value for Contamination, where the positive association between the three prompt total score and the High point item score was $r = 0.43$. This particular association makes conceptual sense, as this is a theme that addresses a narrative that moves from a good to bad scenario, and the prompt is specifically about a good scene.

Similarly, for ratings of task Difficulty and SAM affective responses, both prompt-specific data and summary total scores were collected. As with the narrative theme scores,

significant positive correlations between Difficulty total and prompt-specific ratings and SAM reaction total and prompt-specific ratings ranged from $r = 0.61$ to 0.85 . As such, in the interest of parsimony and an effort to reduce experiment-wide error rates for significance testing, total scores across the three prompts were used for analyses unless otherwise stated.

Means, standard deviations and correlations for the measured variables of interest are presented in Tables 6 and 7. The sample word count average is within one standard deviation of our expected word count average. Variables (Table 6, below) and average word count per narrative appear to have means comparable to other published work using these measures.

Table 6 Means and Standard Deviations for Narrative Three Prompt Total Scores

	N	Mean	SD
Agency	165	1.85	0.86
Communion	165	2.04	0.89
Growth Goals	165	1.35	0.87
Contamination	165	1.02	0.78
Redemption	165	1.01	0.83
Positive Resolution	165	1.31	0.82
Accommodative Processing	165	1.30	0.84
Exploratory Processing	165	1.51	0.91
Meaning Making	165	1.88	0.91
Coherence	165	2.16	0.87
Complexity	165	1.73	0.89
Word Count per Narrative	165	172	53

N = Number, SD = Standard Deviation

Table 7 Means and Standard Deviations for SCC, SAM, Difficulty, LPFS-SR, & PID5.

Questionnaire	N	Mean	SD
SCC at time 1	168	38.58	9.61
SCC at time 2	165	41.54	10.66
SCC at time 3	162	42.33	11.22
Difficulty total	167	10.02	6.60
SAM Pleasure	166	14.68	4.25
SAM Arousal	167	10.71	5.46
SAM Dominance	166	12.39	5.39
LPFS-SR total	166	235.99	53.82
PID5NegAffect	168	1.25	0.45
PID5Detachment	168	0.70	0.40
PID5Antagonism	168	0.71	0.44
PID5Disinhibition	168	1.10	0.37
PID5Psychoticism	168	0.73	0.51

SCC = Self Concept Clarity, SAM = Self Assessment Manikin, N = Number, SD = Standard Deviation

PID5 = Personality Inventory for DSM 5, LPFS-SR = Levels of Personality Functioning Scale self-report.

3.2. Specific Aim I: Evaluating a Global “Developmental Quality” Metric for Narratives

It was hypothesized that there would be a general underlying developmental quality to Narrative data. To confirm unidimensionality, a ratio of the eigenvalues of the first and second factor were anticipated to exceed a value of four--i.e., the first factor explaining at least four times as much variance in the narrative variables as the second.

Exploratory factor analysis (EFA) using a principal component analysis was conducted to determine the factor structure of the eleven narrative variables. As noted earlier, analyses were based upon total scores summed across the three narrative prompts. The intercorrelations between the 11 narrative theme scores are presented in Table 8. As anticipated, most of these theme scores were positively correlated. However, although the scree plot (Figure 3) suggested the presence of one primary factor, the ratio of the first-to-second eigenvalue was only 2.4, well short of the 4.0 hypothesized, and four factors produced eigenvalues greater than one (Table 9). As a reminder, Narrative Identity researchers organize the eleven variables studied in this investigation into four themes (Figure 1, page 2). For factor analysis, component loadings greater than 0.5 will be considered sufficiently weighted to be included in subsequent analyses. In the subsequent sections, emerging theme clusters are identified.

Table 8 Correlation Matrix for Narrative Variables with LPFS-SR

		Agency	Comm	Growth	Contamin	Redempt	Positive Resol	Accom Proc.	Explor Proc	Meaning	Cohere.	Complex	LPFS-SR
Agency	r	1											
Comm	r	0.9	1										
Growth	r	0.52**	0.13	1									
Contamination	r	-0.13	-0.1	-0.20*	1								
Redemption	r	0.11	0.09	0.33**	<-0.01	1							
Positive Resolution	r	0.27**	0.05	0.39**	0.02	0.60**	1						
Accommodative Proc	r	0.16*	0.16*	0.30**	0.03	0.26**	0.23**	1					
Exploratory Proc	r	0.16*	0.07	0.33**	0.08	0.23**	0.26**	0.47**	1				
Meaning Making	r	0.06	0.07	0.25**	0.12	0.31**	0.20**	0.40**	0.52**	1			
Coherence	r	0.27**	0.1	0.38**	-0.03	0.11	0.26**	0.24**	0.33**	0.26**	1		
Complexity	r	0.24**	0.11	0.34**	0.02	0.12	0.20*	0.19*	0.38**	0.29**	0.46**	1	
LPFS-SR	r	-0.28**	-0.07	-0.22**	0.19*	-0.12	-0.1	-0.1	<-0.01	<-0.01	-0.07	-0.09	1

*Correlation is significant at the $p = 0.05$ level, ** Correlation is significant at the $p < 0.001$ level. All scores corrected to two decimal places.

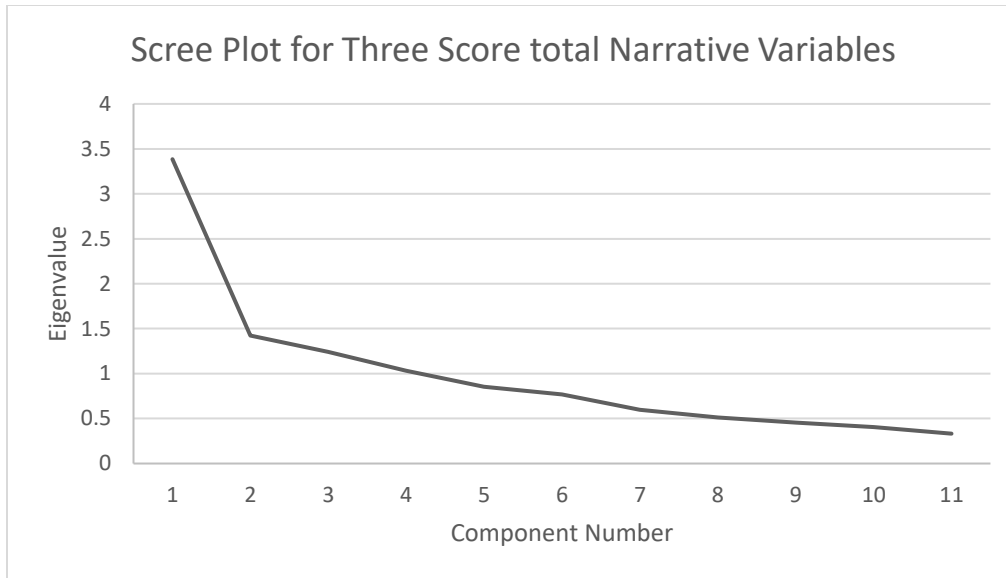


Figure 3 Scree Plot for Narrative Theme Factor Analysis

Table 9 Narrative Variables Rotated Component Matrix^a

Three score total	Component			
	1	2	3	4
Agency	-0.12	0.70	0.25	0.17
Communion	0.28	-0.05	-0.04	0.79
Growth Goals	0.13	0.67	0.41	0.23
Redemption	0.24	-0.02	0.86	0.04
Positive Resolution	0.13	0.24	0.82	-0.06
Accommodative Processing	0.68	0.10	0.21	0.22
Exploratory Processing	0.74	0.29	0.11	-0.05
Meaning Making	0.76	0.09	0.17	-0.07
Coherence	0.33	0.69	-0.03	-0.03
Complexity	0.39	0.65	-0.09	-0.09
Contamination	-0.32	0.23	0.03	0.62
Initial Eigenvalues	3.39	1.42	1.24	1.03
% Variance Explained	30.77	12.93	11.27	9.37

^aExtraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Loadings of 0.50 or greater are presented in bold. Corrected to two decimal places.

In consideration of the four themes proposed by narrative researchers (Figure 1, page 2), assessing the extent to which the obtained four-factor solution corresponds to this organizing framework will be important. Factor 1 is most characterized by positive associations with the

variables Accommodative Processing, Exploratory Processing and Meaning Making. These three variables comprise the *Themes of Integrative Meaning* grouping offered most recently by Adler et al. (2017). The second factor in this analysis has the heaviest loadings from Agency and Growth Goals (two of three *Motivational Themes*), and Coherence and Complexity (which are the two *Structural Themes*). The third factor has the highest loadings from Redemption and Positive Resolution (two of the three *Affective Themes*). Finally, the fourth factor is weighted most heavily by Communion (*Motivational*) and Contamination (*Affective*).

Thus, the factor model produces a summary of themes that is partially compatible with existing literature on Narrative Identity theory, generally supporting the notion of meaning and affective themes, but offering little support for the suggested groupings of motivation and structural themes. However, of overriding significance is that there is very limited support for the hypothesis that these themes are best represented as unidimensional in nature; rather, some clusters of theoretically described themes do seem to be supported here.

As such, in subsequent analyses, the characteristics of narrative production will be represented by these four factor scores, created by totaling specific theme scores that demonstrated component loadings greater than 0.50. These factors are summarized in Table 10 below.

Table 10 Three Score Total Narrative Variables by Factor Loadings

Factor 1 Themes of Integrative Meaning	Factor 2 (Agency) Motivational Themes & Structural Elements	Factor 3 Affective Themes	Factor 4 (Communion) Motivational & Affective Themes
Accommodative Processing	Agency	Redemption	Communion
Exploratory Processing	Growth Goals	Positive Resolution	Contamination
Meaning Making	Coherence Complexity		

If strictly using themes discussed in the Adler et al (2017) paper, it is noted that the second and fourth factors return theme descriptors that partially overlap with each other and with Factor three themes. This highlights a Narrative Identity research dilemma raised in the McLean et al (2019) paper regarding overlap in thematic components. They asked whether cross loadings could be excluded from a model in favor of greater parsimony and concluded that because insufficient data existed on these psychometric properties of narrative themes, analyses needed to be included to compare the utility of abridged factors.

As such, alternate theme titles Agency and Communion have been considered in Table 10, and we discuss these here. Wiggins (1979, 1982) and Wiggins and Broughton (1985) introduced the interpersonal circumplex model, which Gurtman (2009) describes as a two-dimensional representation and of an interpersonal space incorporating interpersonal needs, problems and values. Authors have considered Agency and Communion as fundamental modalities for human existence (Bakan, 1966), because becoming individuated (Agency) and becoming connected (Communion) have been regarded as universal experiences (Gurtman, 2009).

From the Interpersonal angle, Agency involves ideas of dominance, power, status, and control. The Adler et al (2017) variables of Agency, Growth Goals, Complexity and Coherence, describe characteristics like status striving, self-mastery, intentional efforts toward goals, and story integration into the narrator's larger life themes. These characteristics seem to be subsumed in the overarching Agency theme. Communion, from the interpersonal circumplex model, suggests love, affiliation, union, and friendliness (McAdams, Hoffman, Mansfield, & Day, 1996; Wiggins, 1991; Wiggins & Trapnell, 1996). This description is very close to the togetherness and harmony descriptors of Narrative Identity operationalization (McAdams et al, 2006; Adler et al, 2017 etc.). In order to receive a Contamination code, the story necessarily involved a move from a good, affectively positive scene to an affectively negative one. Stories receiving the code often began with scenes that would include the positive aspects of Communion and then turn to negative affective descriptions related to people or the environment. This leads us to conceptualize contamination in this factor as an additional indication of the individual's desire (or lack thereof) to connect to others, i.e. related to the broader Communion theme.

3.3. Specific Aim II: DSM-5 Personality Disorder *Criterion A* and *Criterion B* are Distinctly Related to Narrative Identity

In this aim, it was hypothesized that the quality of narratives about the self are a distinct element of personality uniquely related to Criterion A (level of personality functioning, here measured with the LPFS-SR) above and beyond that explained by pathological personality traits (here measured with the PID-5). To accomplish this aim, the narrative theme factors derived from Specific Aim I (i.e. Themes of Integrative Meaning, Agency/Motivational Themes & Structural Elements, Affective Themes and Communion/Motivational & Affective Themes) were predicted from LPFS-SR total score and PID-5 domain using Hierarchical Linear Regression.

PID-5 domains were entered in the first block of analysis, and LPFS-SR entered as the second block. It was anticipated that the second block (i.e., Criterion A) would significantly increment the first block (i.e., Criterion B) in explaining variation in narrative quality. Table 11 summarizes bivariate correlations between Narrative Theme variables and LPFS-SR total as well as PID5 Domain Scores. Hierarchical regression analyses are summarized in Tables 12 to 16 below.

Table 11 Correlations Between Narrative Themes and Personality Measures

Narrative Theme	LPFS-SR Total	PID 5 Negative Affect	PID 5 Detachment	PID 5 Antagonism	PID 5 Disinhib	PID 5 Psychotic
LPFS-SR	1.00	0.69**	0.67**	0.26**	0.31**	0.57**
Motivation & Structure	-0.22**	-0.20*	-0.32**	-0.12	-0.22**	-0.21**
Themes of Integrative Meaning	-0.05	0.01	-0.07	.00	-0.12	.00
Affective Themes	-0.13	.00	-0.19	-0.05	-0.08	-0.11
Motivation & Affect	0.08	0.07	0.01	-0.16*	-0.03	-0.01

Table 12 Hierarchical Regression for Personality Variables Predicting Themes of Integrative Meaning

	β	t	p	R	R ²	ΔR^2
Step 1			0.57	0.16	0.02	0.02
Neg Aff	0.04	0.42	0.68			
Detachment	-0.09	-0.97	0.33			
Antagonism	0.02	0.18	0.86			
Disinhibition	-0.15	-1.63	0.11			
Psychoticism	0.10	0.86	0.39			
Step 2			0.65	0.16	0.03	<0.01
Neg Aff	0.07	0.63	0.53			
Detachment	0.02	-0.61	0.54			
Antagonism	-0.15	0.16	0.87			
Disinhibition	0.11	-1.59	0.11			
Psychoticism	-0.07	0.92	0.36			
LPFS-SR Total	0.02	-0.55	0.59			

When the Themes of Integrative Meaning factor was predicted from PID5 traits in the first step and LPFS-SR Scores in the second step, it was found that neither trait scores nor LPFS-SR total scores were significant predictors of responses fitting this narrative theme. The overall model fit was poor, with $R^2 = 0.024$ at the first step and 0.002 added at the second step.

Table 13 Hierarchical Regression for Personality Variables Predicting Motivational Themes & Structural Elements

	β	t	p	R	R^2	ΔR^2
Step 1			<0.01	0.33	0.11	0.11
Neg Aff	0.05	0.48	0.63			
Detachment	-0.26	-2.77	<0.01			
Antagonism	-0.01	-0.11	0.91			
Disinhibition	-0.12	-1.58	0.12			
Psychoticism	0.04	0.31	0.76			
Step 2			<0.01	0.33	0.11	<0.01
Neg Aff	0.05	-0.45	0.65			
Detachment	-0.26	-2.49	0.01			
Antagonism	-0.01	-0.11	0.92			
Disinhibition	-0.14	-1.58	0.12			
Psychoticism	0.04	0.30	0.76			
LPFS-SR	0.01	0.07	0.95			
Total						

When the Motivational Themes & Structural Elements factor was predicted from PID5 traits in the first step and LPFS-SR Scores in the second step, it was found that trait scores were significant predictors at the first and second step, but LPFS-SR total scores did not increment the predictive capability of the model. The overall model fit was fair, with $R^2 = 0.110$ at the first step and $R^2 < 0.01$ added at the second step. PID5 Detachment seemed to be driving model predictive capabilities, such that people who were more likely to include Motivational themes (Agency and Growth Goals) as well as Structural Elements (Coherence and Complexity) were less likely to endorse the PID5 Detachment trait.

Table 14 Hierarchical Regression for Personality Variables Predicting Affective Themes

	β	t	p	R	R ²	ΔR^2
Step 1			0.18	0.22	0.05	0.05
Neg Aff	-0.15	1.55	0.12			
Detachment	-0.21	-2.20	0.03			
Antagonism	0.02	0.17	0.86			
Disinhibition	-0.03	-0.29	0.77			
Psychoticism	-0.07	-0.55	0.58			
Step 2			0.20	0.23	0.05	<0.01
Neg Aff	0.21	1.85	0.07			
Detachment	-0.16	-1.50	0.14			
Antagonism	0.01	0.14	0.89			
Disinhibition	-0.02	-0.24	0.81			
Psychoticism	-0.05	-0.43	0.67			
LPFS-SR	-0.13	-1.01	0.31			
Total						

When the Affective Themes narrative theme factor was predicted from PID5 traits in the first step and LPFS-SR Scores in the second step, it was found that neither trait scores nor LPFS-SR total scores were significant predictors. The overall model fit was poor, $R^2 = 0.047$ at the first step and 0.006 added at the second step. Although the omnibus significance test suggested no significant prediction of Affective themes, as noted in Table 14, PID5 Detachment scores were significantly negatively associated with use of Affective Themes, a trend noted above for Motivational themes and Structural Elements and Agency.

Table 15 Hierarchical Regression for Personality Variables Predicting Motivational & Affective Themes

	β	t	p	R	R ²	ΔR^2
Step 1			0.27	0.20	0.04	0.04
Neg Aff	0.10	1.05	0.30			
Detachment	-0.03	-0.30	0.77			
Antagonism	-0.22	-2.24	0.03			
Disinhibition	<-0.01	-0.02	0.99			
Psychoticism	0.08	0.68	0.50			
Step 2			0.34	0.21	0.04	<0.01
Neg Aff	0.07	0.59	0.56			
Detachment	-0.06	-0.56	0.57			
Antagonism	-0.21	-2.21	0.03			
Disinhibition	<-0.01	-0.05	0.96			
Psychoticism	0.07	0.60	0.55			
LPFS-SR	0.08	0.66	0.51			
Total						

When the Motivational & Affective narrative theme factor was predicted from PID5 traits in the first step and LPFS-SR Scores in the second step, it was found that neither the trait scores model nor LPFS-SR total scores model were significant predictors. The overall model fit was poor $R^2 = 0.039$ at the first step and 0.042 at the second step. Although the omnibus significance test suggested no significant prediction of Motivational and Affective themes, Table 15 indicates that PID5 Antagonism was a significant negative predictor of the Motivational & Affective Themes variable (meaning greater Contamination and Communion scores may predict less likelihood of PID5 Antagonism elevations) conceptually these results make sense because in order to receive a point for both of these variables, the participant must describe a sense of harmony and togetherness with other people (Communion) or the scene moving from good to bad (Contamination). People who demonstrate PID5 Antagonism (described as being like low

agreeableness, e.g. Hopwood, Schade, Krueger, Wright & Markon, 2012) at a trait level may be less likely to tell stories that include these transitions.

3.4. Specific Aim III: Impact and Utility of Narrative Tasks

Another purpose of this study was to explore the impact and utility of narrative tasks. First, affective response, Difficulty and Self-Concept Clarity as assessed immediately after performing the narrative task were used to consider impact, with the predictions that people who were experiencing personality impairment would experience greater negative affect and difficulty in completing the task than those not flagged as experiencing impairment. It was also predicted that people experiencing personality impairment would be less likely to experience increases in Self-Concept Clarity upon completing a narrative task than those not flagged as experiencing impairment.

The impact of the narrative task on the sample as a whole is described in Table 16. It shows the means, standard deviations and paired sample t-tests for impact measures, organized by time. Paired samples t-tests confirm the statistical significance of this impact between the High Point and Low Point, and between the Low Point and the Turning Point. For SAM Affect and Difficulty, mean ratings after each prompt are displayed. For Self-Concept Clarity (SCC), scores are at baseline (i.e. before any narrative activity) and after the narrative activity (i.e. after three stories).

Table 16 Means, Standard Deviations and Paired Samples t-tests (t): Difficulty, SAM Affect & Self-Concept Clarity (SCC) by Time

Impact Measure	Mean	SD	t	df	Significance
Difficulty					
High Point	2.44	2.58	-7.22	166	$p < 0.01$
Low Point	4.29	3.09			
Turning Point	3.32	2.84	4.45	166	$p < 0.01$
Valence					
High Point	6.68	2.22	16.1	166	$p < 0.01$
Low Point	3.07	1.88			
Turning Point	4.95	2.24	-9.82	165	$p < 0.01$
Arousal					
High Point	3.79	2.21	1.9	166	0.06
Low Point	3.43	2.33			
Turning Point	3.5	2.19	-0.52	166	0.6
<hr/>					
SCC Before stories	38.58	9.61			
SCC After stories	41.55	10.66	-6.35	164	$p < 0.01$

SAM = Self Assessment Manikin. df = degrees of freedom. All values corrected to two decimal places. T-tests compare the Low Point to the High Point on the first line, and to the Turning Point on the second line.

Results suggest that in general, performing the narrative tasks had a demonstrable impact on emotional tone and on self-concept clarity. People had a clearer self-concept after doing narrative tasks, and there were differing reactions to narrative tasks that are conceptually aligned: people rated the High Point story as the least difficult and the Low point story as the most difficult. Similarly, participants rated the High Point story as the most pleasurable (with higher valence scores) and the Low point story as the least pleasurable (with lower valence scores). These findings clarify the impact of narrative tasks in terms of facilitating Self-Concept Clarity and they suggest that the task can be more or less pleasurable, as well as more or less difficult, depending on the prompt being presented.

However, it was also hypothesized that the narrative task would differentially impact participants, as a function of their level of personality functioning. Specifically, it was anticipated that participants with greater personality impairment would experience greater negative affect and difficulty in completing the task and be less likely to experience increases in Self-Concept Clarity. Correlations between personality functioning (as measured with the LPFS-SR) and narrative impact measures are presented in Table 17 below. The SAM ratings and the difficulty scores are direct measures of impact as assessed following narrative task performance; the SCC was administered pre- and post-task, and residualized change scores (Cronbach & Furby, 1970) were used to assess SCC change. The residualized change method addresses the problem of using simple calculations of difference between pre and post test scores because it reduces the contribution of measurement error from the initial administration.

Table 17 Correlations for Difficulty, SAM Affect, and Self-Concept Clarity Change with LPFS-SR and Narrative Themes

Impact Measure	LPFS-SR Pearson's <i>r</i>
Difficulty	0.29*
High Point	0.12
Low Point	0.16*
Turning Point	0.19*
Arousal	0.09
High Point	-0.07
Low Point	0.17*
Turning Point	0.12
Valence	-0.03
High Point	-0.04
Low Point	0.04
Turning Point	-0.05
SCC Change^a	-0.19*

^aResidualized score, * Correlation is significant at the $p < 0.05$ level. All values corrected to two decimal places.

The prediction that people who were experiencing personality impairment would experience greater Difficulty in completing the task than those not flagged as experiencing impairment was supported: Difficulty scores were higher in general for those with higher LPFS-SR total scores. This prediction was not supported for negative affect as neither arousal nor valence scores were predictive of LPFS-SR total scores, except in the case of the Low Point Arousal. People with higher LPFS-SR scores (i.e, greater personality impairment) were more

likely to have higher arousal following this task than people with lower LPFS-SR scores. It was also predicted that people experiencing personality impairment would be less likely to experience increases in Self-Concept Clarity upon completing a narrative task than those not flagged as experiencing impairment, and this was supported. While in general, the sample saw increases in SCC, the negative correlation between LPFS-SR scores and residualized change supports the prediction that people with higher LPFS-SR total scores were less likely to experience increases in SCC after narrative tasks in comparison to those with lower LPFS-SR scores. Figure 4 displays this relationship, below; higher impairment participants began the study with appreciably lower self-concept clarity and were less likely to experience increases in this clarity following the narrative task.

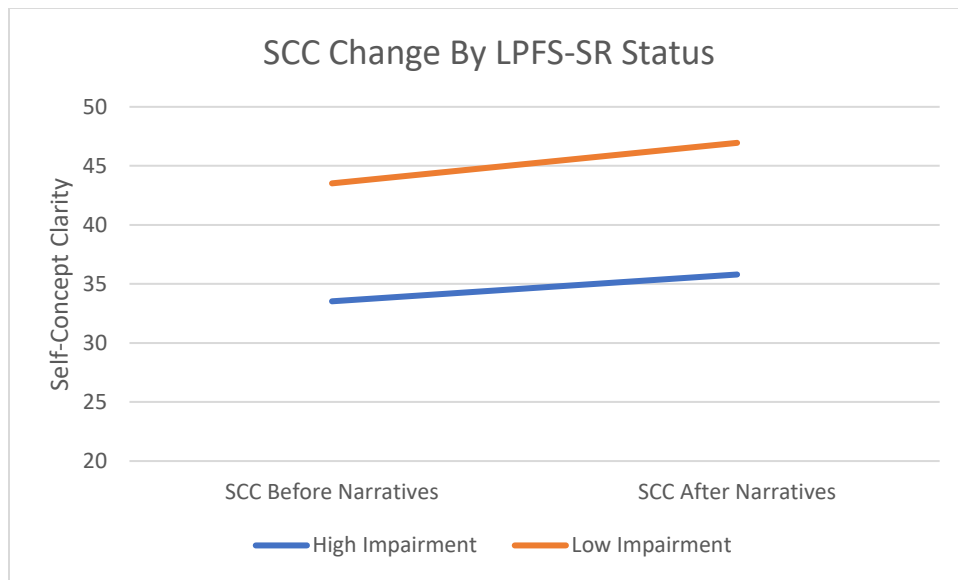


Figure 4 Self-Concept Clarity Change by LPFS-SR Status

3.5. Specific Aim IV: The Impact of Re-Storying

Readers will recall that participants were asked to re-read their Low Point narratives and then asked to rate it on several self-confrontation metrics. They were then asked to tell, for a second time, the story of the Low Point.

The question “Can Narrative Identity be positively impacted by re-storying?” is addressed in this section. We hypothesized that people who are experiencing personality impairment may be more likely to experience enhanced Self-Concept Clarity upon completing a restructured narrative task that instructs participants to focus upon “healthy” aspects of narrative activity. Results are presented in Tables 18 and 19 below.

Table 18 Means Standard Deviation (SD) & Paired Samples t-test (t): Difficulty, SAM & Self-Concept Clarity (SCC) by Time

Impact Measure	Mean	SD	t	df	Sig.
Difficulty					
Low Point	4.29	3.09			
Re-storied	3.42	2.48	4.028	161	<0.01
Low Point					
Valence					
Low Point	3.07	1.88			
Re-storied	4.93	2.05	-10.23	161	< 0.01
Low Point					
Arousal					
Low Point	3.43	2.33			
Re-storied	3.45	2.11	-0.29	161	0.77
Low Point					
SCC					
After first 3 stories	41.55	10.66			
After re-story	42.33	11.22	0.01	160	0.99

SAM = Self-Assessment Manikin. df = degrees of freedom. All values corrected to two decimal places.

In terms of impact, our results suggest that while mean scores are higher on SCC after re-storying, there was not a significant increase in self-concept clarity after doing the re-storying tasks. They also show that participant's ratings of Difficulty decreased from the initial Low Point story to the re-storied Low Point. Participants also had higher valence scores after re-telling the Low point, meaning that they experienced more pleasure after the re-storying exercise than they had initially. These findings may offer some clarification on the impact of narrative tasks in

terms of facilitating Self-Concept Clarity – scores increased, but not significantly so. Results also suggest that the task can be more pleasurable, as well as less difficult after re-storying.

A second aspect of Aim IV involved evaluating whether re-storying would differentially impact participants as a function of their level of personality functioning. To demonstrate differential impacts, correlations (Pearson’s *r*) between LPFS-SR total scores and residualized change in Affect, Difficulty and SCC scores (i.e., pre- and post-restorying) are presented in Table 19. Residualized change scores for SCC are calculated comparing the SCC score following the initial narratives to their score after re-storying. Residualized change scores for Affect and Difficulty are calculated using participant ratings immediately following their initial Low Point story and the ratings provided immediately after the re-storying task.

Table 19 Correlations: Difficulty, Affect & Self-Concept Clarity Change with LPFS-SR and Narrative Themes

Impact Measure	LPFS-SR Pearson’s <i>r</i>
Difficulty Change ^a	0.07
Arousal Change ^a	0.21**
Valence Change ^a	0.04
SCC Change ^a	-0.19**

^aResidualized score, ** Correlation is significant at the $p < 0.01$ level. * Correlation is significant at the $p < 0.05$ level All values corrected to two decimal places.

These results suggest that while the sample in general experienced increases in Self-Concept Clarity after the narrative tasks, the high LPFS-SR scorers (i.e. people demonstrating personality impairment) are less likely to experience enhanced Self-Concept Clarity upon completing a re-storying task in comparison to low LPFS-SR scoring participants, although the difference in change for the sample as a whole was not significant. These results also show that

on average, higher arousal scores are associated with having greater impairment (i.e. higher LPFS-SR scores), but for the higher impairment group, the change in Arousal represents a reduction in this affect over time. Figures 5 and 6 demonstrate the relationships between Arousal change (Figure 5) and SCC change (Figure 6) by LPFS-SR group.

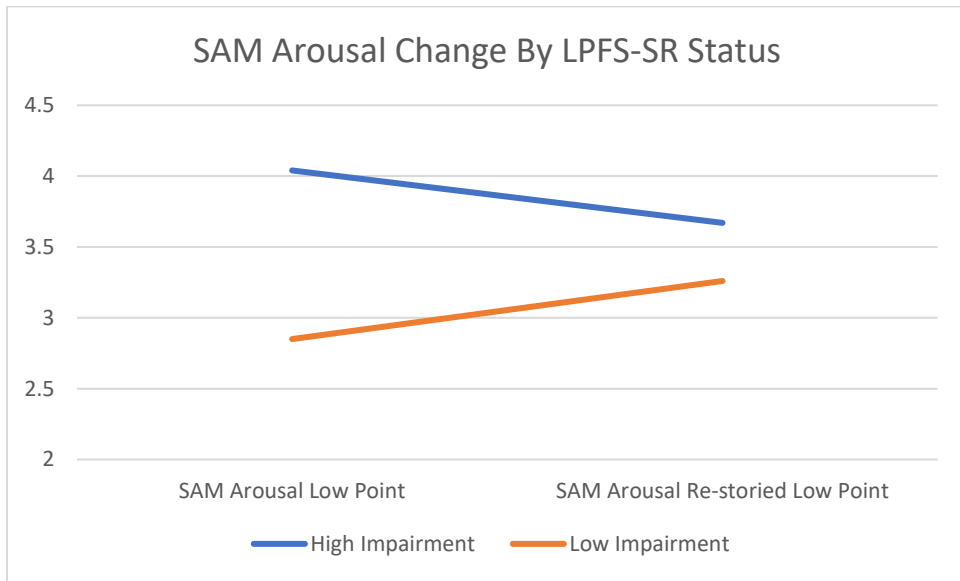


Figure 5 Arousal Change by LPFS-SR Groups

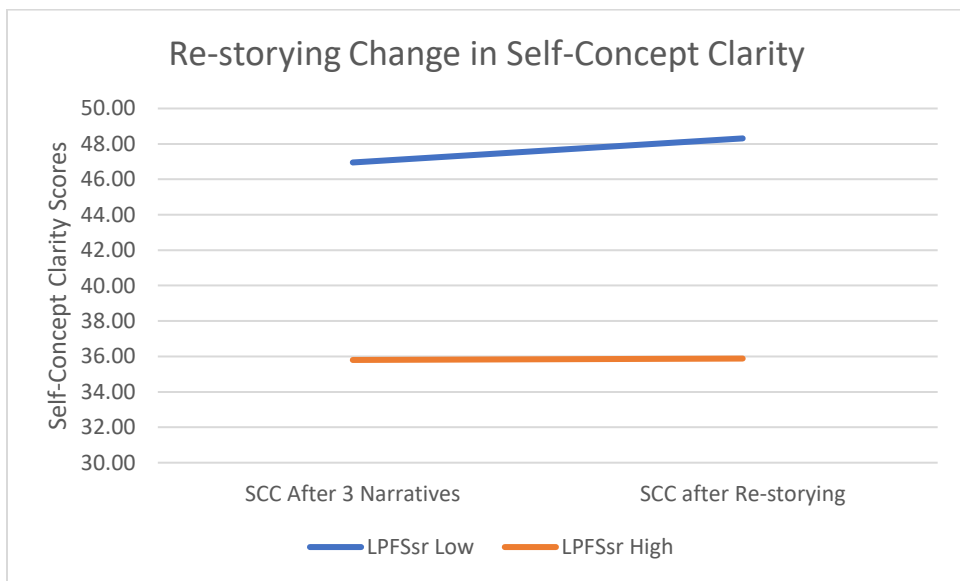


Figure 6 Self-Concept Clarity Change After Re-storying

4. DISCUSSION AND CONCLUSIONS

The goal of the current study was to examine, first, whether themes emerging from personal narratives are related to personality problems, and second, to determine whether the act of providing such narratives might have a differential impact on participants as a function of their level of personality problems. Although support for the former was limited, there was some evidence supporting the latter prediction. However, across study aims, the results help to shed light on the method and nature of Narrative Identity.

An initial aim was to determine whether a global developmental quality metric could adequately represent the general structure of narrative responses. In this investigation, results suggest that instead of a single factor, there seems to be a four-factor structure to the eleven narrative variables included in this study. Although the first factor among these narrative variables did explain at least twice as much variance as the second factor, the hypothesis that the ratio of eigenvalues between the first factor and the second factor would exceed a value of four was not supported. Do these findings present sufficient evidence that narrative variables *are not* unidimensional?

Since *Specific Aim I* is concerned with the utility of narrative products (i.e. the benefit of quantifying people's stories as "Narrative Identity") and the remaining analyses hinge on its results, it takes an empirical approach to exploring Narrative Identity variables. We distinguish the first four factors within their existing theoretical contexts and analyzed them separately in the subsequent sections of the paper so that we were less prone to a premature H_0 acceptance. While a small collection of research has suggested that the utility of narratives is directly tied to the context in which they are solicited and provided (e.g. Adler et al, 2017; McLean et al, 2019),

there is very little work on the psychometric behavior of narrative techniques given the variance in operationalization.

One goal embedded in this aim was to more formally “localize” Narrative Identity in the metrics used. The somewhat ambitious goal of coding the 11 most popularly studied variables in order to better understand their psychometric properties was taken on. As we noted earlier, Narrative Identity is often studied in relation to mental health outcomes such as well-being (Adler, Lodi-Smith, Philippe & Houle, 2015) and clinical population outcomes (Adler, Wagner and McAdams, 2007). This specific aim is about measurement issues, meaning that the results should answer or facilitate the answers to questions of measurement utility and efficiency in Narrative Identity research.

McAdams (2018) notes that Narrative Identity “is conceptualized as something more varied and dynamic, more culturally contoured and more situated in...conversational performances” (p.361). He states that there are two main camps of Narrative Identity researchers— those who consider it to be a big story that integrates many different elements, and those who focus on small stories as they appear in circumscribed domains and contexts. These differences in approach to measuring or even eliciting Narrative Identity are important to note, because they reflect the diversity under which narratives are produced in real life. Having both schemes at hand but maintaining the data driven strategy to decide on subsequent analyses is useful because it serves the initial purpose of giving additional information about whether these variables behave in theoretically suggested ways, and then we are able to test whether more parsimonious schemes produce the same or very similar results.

Reflecting on the discussion put forth by Adler et al (2017) about narrative methodology leads to the question of whether there is a “gold standard” to using narrative methods. The

authors break down the methodology into four aspects: asking narrative questions, designing narrative prompts, collecting narratives and coding narratives. To achieve a streamlined investigation, we used unaltered narrative prompts taken directly from the LSI (McAdams, 2008).

According to Adler and colleagues (2017) “written approaches may produce briefer and possibly more coherent responses, reduce interviewer effects and may facilitate the sharing of sensitive information” (p. 153). This is one reason that typed responses were used in the current study. Having participants respond individually in cubicles meant that we could collect more participants simultaneously per hour and this would help us ensure that we collected our desired sample sizes. This method also reduced the required workforce at the administration phase, as the sample (N = 166) was comfortably collected by two research assistants and the first author.

Adler and colleagues (2017) also described the process of coding narratives. They note that the variables selected should be chosen based on study-specific hypotheses, and that coding systems based on the available literature are a viable option, particularly when prompts are identical to prior work and the participants are not at a substantially different developmental stage or background. Thus, we used the one score per scene approach described by Adler and colleagues so that we could analyze data at the level of the specific scene (for e.g. the low point), at the level of the individual (i.e. by calculating a summary score, the average score across all scenes within the individual), and then by component variable.

Here we find support for the decision to analyze the subsequent hypotheses with each of the four factors derived from task completion. Our results diverge from our predictions. In consideration of this fact, we have a few theories about why this might be the case. First, at the time of proposing this research, there had not been a paper that utilized as many as eleven

variables being coded in multiple stories to test psychometric properties. This is because eleven variables being coded in three original prompts and one re-told story by 166 participants is 7304 codes. It is time and labor intensive work. In the past eight months, three papers have been published on any psychometric aspect of Narrative Identity (i.e. Graci, Watts & Fivush, 2018; Adler et al, 2018 & McLean et al, 2019), but as is noted in the McLean and colleagues paper, the Graci and colleagues and Adler and colleagues papers only look at a single sample responding to one prompt, and both studies narrowly consider very specific types of scenes (e.g. a stressful event, or a traumatic event).

The McLean and colleagues (2019) paper found a three factor structure to Narrative variables (designated Motivational and Affective, Autobiographical Reasoning and Structural Aspects), which also represents some overlap of themes that have been discussed as related but distinct (i.e. Motivational and Affective). They also utilized different variables and concede that their contribution is limited to the variables that they included.

To put it in the words of author Brooks Horsley (2001), “There is more than one way to shake a carbuncle.” (p. 173). Adler and colleagues (2017) as well as McAdams (2018) note that researchers have many strategies to study narrative, but a few methodological components remain important regardless of the strategy being used. First, the goal of parsimony is an important one: being able to collect meaningful data with as few variables as possible is valuable, as each additional variable adds hours of coding and analysis labor to the project. Given the fact that the nature of narratives requires some amount of diversity in prompt and theme operationalizations (Adler et al, 2017), it stands to reason that many types of prompts are required to fully glean psychometric utility. It also stands to reason that where possible, themes should be tied to other theories of personality and identity.

A second important goal of the study sought to determine the relationship between the use of different narrative themes and various measures of personality impairment. Although both narrative researchers (e.g. McAdams, 1995; McAdams & Pals 2006; McLean and colleagues, 2019) and DSM-5 Personality and Personality Disorders Work Group (e.g Bender, Morey and Skodol 2011) discuss levels of personality, an additional question highlighted by this work is whether these terms mean the same thing in these contexts. The hypothesis that “Good” (or Healthy) narratives about the self are a distinct element of healthy personality related to Criterion A (personality functioning) above and beyond that explained by pathological personality traits was not supported. In our results, personality functioning (operationalized by LPFS-SR scores) did not increment traits (PID-5) in their predictive capability of Narrative variables as operationalized here (i.e. Themes of Integrative Meaning, Agency, Affective Themes and Motivational & Affective Themes). PID-5 associations with narrative themes were also meagre, suggesting that either the narrative variables chosen here are not associated with personality functioning, or that the metrics involved do not allow for meaningful comparisons.

Narrative Identity, as defined by our four factors seems inappropriate as an analogue to levels of personality functioning from self-report. Despite this, there is evidence to suggest that Narrative Identity can be used to measure personality functioning. The Cruitt et al (2018) paper found that ratings of the 12 item LPFS made directly from Life Story Interviews was incrementally predictive of personality problems, above and beyond traits. Though the power of that predictive capability was not substantial, it does suggest that it should be possible to glean personality functioning information from narrative data. Perhaps one consideration of the present work is our comparison of Narrative Identity metrics which are categorical and the levels of personality functioning scale, which is meant to be a spectrum.

Returning to AMPD conversations, Criterion A impairment is designed to capture general severity of personality problems. It is an answer to the question of muddying overlap in personality disorder categorizations. Bender, Morey and Skodol (2011) discuss those central disturbances of personality disorders (PDs) of all types that relate to how a person views themselves and other people. The idea that there is an underlying quality that drives personality dysfunction is helpful in explaining the prevalence of comorbidity in PDs. Something other than traits (i.e. Criterion B) seems to have predictive power in terms of the likelihood of DSM personality disorders (e.g. Morey, Bender & Skodol, 2013; Morey et al 2011). The picture being presented by AMPD workforce researchers is of severity of impairment as a distinct aspect of personality problems that helps explain overlap because it is dimensional rather than categorical. We presented Narrative Identity as an analogue to AMPD Criterion A because it is purported to be a distinct level of personality that also demonstrates a person's self and interpersonal functioning (McAdams, 1995; McAdams & Pals, 2006). Specific Aim I investigations of the psychometric properties of narrative variables as they are popularly operationalized reveals that this operationalization results in variables that are not a unidimensional spectrum of functioning. Specific Aim II further clarifies that if researchers aim to use Narrative Identity methodology as an indicator of level of personality functioning, then the conventional scoring themes used in coding narrative themes appear to offer limited utility for this purpose.

Speaking of the concept of identity, McAdams (2018) reflects on its manifestation. He suggested that if you could see it, it would look like a story. According to him, it would integrate different psychological elements (e.g. narrative themes) and it would “bring a certain kind of narrative order and logic to the chaos of experienced life” (p. 361). Earlier sections of the current paper have acknowledged the variability in methodology in terms of how narrative variables are

measured. One interpretation is that the first part of McAdams' (2018) definition above describes those narrative themes that were used here, and that are used in the vast majority of narrative research. A second interpretation is that "narrative order and logic" is an additional metric. The original hypothesis in this work was that "good" or "healthy" narratives about the self are a distinct element of healthy personality, but it can be argued that we failed to assess stories for "goodness" or "health" on a dimension, and instead only assessed these qualities as categorical variables.

One way to address this limitation in future research is to have participants rate their stories on a spectrum from "bad" to "good" representations of themselves. Another method might be to have others rate stories on a spectrum from bad to good representations of self and interpersonal functioning in the assessed individual. There is some precedent for this in the Cruitt and colleagues (2018) study because diagnosis-blind raters used the short form LPFS (APA, 2013; Bender et al, 2011) to rate a sample of video recorded Life Story Interviews. They found that rated LPFS subscales captured aspects of personality that were not captured by personality traits. It seems that the utility of narrative data is tied to the way it is operationalized.

In terms of existing claims that Narrative Identity is distinct from traits (McAdams, 1995; McAdams & Pals, 2006), most work demonstrates convergent validity with other metrics of well-being, but perhaps more work is needed to demonstrate discriminant validity under the various operationalizations of Narrative Identity. Additionally, McAdams describes the story itself as a representation of identity, meaning that any assessment for unidimensionality should specifically integrate evaluations of the story that clarify self and other functioning.

A second overarching goal of the project was to study the impact of the narrative task on participants, anticipating that this impact would vary as a function of level of personality functioning. We predicted that people with personality impairments would experience greater negative affect and difficulty in completing the task than those not flagged as experiencing impairment. The results support the latter claim, in that people who had higher LPFS-SR total scores were more likely to endorse the narrative tasks as being more difficult than those with lower LPFS-SR total scores. We also predicted that the high impairment group would be less likely to experience increases in Self-Concept Clarity upon completing the narrative tasks. Higher impairment scores were associated with less change in Self Concept Clarity after narrative tasks, though in general, participant scores increased with narrative activity. The suggestion that the high impairment group would experience greater negative affect in general was not supported, suggesting that the observed differential impact upon perceived difficulty and self-concept clarity were not simply reflections of a negative emotional experience.

Results provided some important insights into the impact of narrative tasks in general – SCC scores increased on average for the whole sample after each narrative task. In terms of Difficulty ratings, the LPFS-SR status of a participant was predictive of their ratings of Difficulty such that higher rated impairment correlated with higher rated Difficulty. Participants in the high impairment LPFS-SR group rated more arousal while doing some narrative tasks, but this association was not always predictable. SAM Valence ratings were also not associated with LPFS-SR status, meaning that the impact of doing narrative activities in terms of experienced pleasure was not related to LPFS-SR status.

In terms of considering what these results mean, it seems that people with personality impairment struggled more than those without impairment while completing narrative tasks, but

not necessarily as a function of affect. This makes two points apparent. First, it suggests that the performance of and reaction to narrative activity does have the potential to serve as an indicator of personality functioning. Secondly, positive associations between narrative activities and SCC offer insight about what narrative activity *does* for the narrator. The act of telling the story may clarify ideas about the self, and it would be an interesting future direction to measure whether that clarification of self is captured in a subsequent story.

It was previously noted that developing dimensional assessments of identity functioning in narrative responses is an important one. Drawing on prior research helps clarify ways that this can be done. For example, the Pasupathi et al (2015) paper measured identity representation within stories on a 7 point Likert scale from 1 (not central at all) to 7 (completely central). Later, the group found that positive associations with growth in narrative responses and well-being metrics were contingent upon whether the participants had considered their stories to be central to their identity.

In a conversation about the impact of narrative, the salience of the stories being told seems like an important variable to consider. Working to make narrative information more comparable to other areas of personality literature is helpful, as many (e.g. McLean et al, 2019; McAdams, 2018 & Adler et al 2017) have commented on the comparison problems (even within the Narrative Identity field alone) associated with a highly variable methodology.

The utility of narrative tasks has also been discussed in terms of therapy interventions. In this study, we found that higher personality impairment was associated with greater endorsed Difficulty at completing the task, as well as less likelihood of Self-Concept Clarity increases. Does this preclude narrative based interventions with this population? In our review of the literature, we found suggestions that people with personality impairment can benefit from

narrative techniques (e.g. Pabst et al, 2014; Steuwe et al, 2016). Participants in these studies completed and benefitted from narrative based therapies. Additionally, there is a precedent in the Styla (2018) paper suggesting that fluctuations in SCC are an expected response in people experiencing personality impairment. How do these fluctuations change over longer periods of time, and what do the fluctuations mean in terms of the individual's perceived quality of life? How do narrative activities factor into this response? Long term responses to narrative activities seem to be an interesting area for future research.

These data only represent the tip of the iceberg. Considerations of using narrative interventions given these results necessarily begin with the acknowledgement that much work is left to be done. The current findings about impairment and perceived Difficulty of narrative task give one rationale for considering more indirect or facilitative methods with clients who present with personality problems. If the act of talking about the self can result in uncertainty about that self, then it stands to reason that this may have some impact on a client's motivation to do so. Therefore, with a client who may be displaying personality problems it may be a beneficial strategy to target identity problems indirectly, or with regular reinforcement of previously endorsed self-statements, and the supply of tools to help the individual do this work. This idea is explored further as a rationale for the potential promise of a "re-storying" strategy.

In our final section, we predicted that people who were experiencing personality impairment would be more likely to experience enhanced Self-Concept Clarity upon completing a restructured narrative task that instructs participants to focus upon "healthy" aspects of narrative activity. Interestingly, it was the participants with the least evidence of personality impairment who demonstrated increasing in self-concept clarity upon re-storying. While higher

scoring participants on the LPFS-SR measure did not experience significant increases in SCC in general, there were interesting findings.

As noted in the introduction, this activity was designed to present participants with the notion of *flexibility*, i.e. the capability to revise knowledge of the self in light of new information, and *accuracy*, as in an evaluation of self that is neither too self-critical nor too grandiose (Singer, et al., 2012). We theorized that an intervention that gives the participant information about the components that should be in the story initiates the movement of story by giving the individuals tools to re-tell a life story in a more adaptive way. We aimed to help those who are less flexible and accurate to become more so.

We noted the possibility of changing abilities to narrate one's experiences and hoped to start exploring this idea in this study. In Specific Aim III we theorized that people with higher LPFS-SR total scores would find narrative tasks more aversive because they would feel more confused and unclear about their identity than those not experiencing personality impairment. We also theorized that the issue of competence would factor into people's ratings of Difficulty such that lower Self-Concept Clarity and higher LPFS-SR scores would result in higher Difficulty ratings.

In this study, we used Difficulty ratings after every narrative and SCC at baseline as a proxy for the individual's perceived competence to perform a narrative task, such that less perceived competence should result in lower SCC scores and higher Difficulty ratings. We found some support for this, because participants rated less Difficulty on average after the self-confrontation (Hermans, 1992; Lyddon, Yowell & Hermans, 2006) intervention. This lessening of perceived difficulty is some indication that perhaps there were some gains in tools (cf. Bruner, 1991), if not knowledge of the self.

A limitation of this design is that we could have even more directly asked participants about competence, and we could have asked participants for a pre-narrative assessment of their perceived effort/amount of Difficulty associated with completing a narrative task. That is, we could have asked them to rate their own competence and the difficulty they might experience in telling a story about themselves, and then continue to measure competence and Difficulty ratings after each narrative as we did.

The current investigation was a four-part assessment of Narrative Identity measures. First, we set out to determine whether there is a global developmental quality metric in the eleven most popularly studied narrative variables, and we found that these variables work as they are oriented – they are categorical representations that seem to cluster into theoretically supported themes (Specific Aim I). McAdams' (1995) early charge to personality research was that we were losing important information gleaned from stories. The narrative field did a good job of addressing this charge by quantifying stories with categorical variables, and the current paper has identified an additional need in narrative work (Specific Aim II). In order for Narrative Identity researchers to compare narrative data to other personality measures (like the LPFS-SR), they must create dimensional measurements that capture the functioning of self.

We also considered the impact (Specific Aim III) and utility (Specific Aim IV) of narrative activity and found that people with personality impairment find the task of narrative more difficult than those not experiencing impairment, and this Difficulty rating may be decreased by instruction about how to tell the story, specifically in the high impairment group. These results are promising because they may temper concerns that doing narrative activities with people who experience personality impairment is too aversive to be beneficial. Of course, there is much work to be done. From the perspective of research utility, several suggestions have

been included in the current paper of ways to further personality research with the use of narrative data including measuring self and interpersonal functioning in stories on a dimensional scale, asking participants to make predictions about how difficult they might find narrative activity and asking them to rate the salience of their stories after they have been produced.

The study has demonstrated that there may be some utility to furnishing knowledge to people creating narratives, and there is also evidence to suggest that relationships between Narrative Identity metrics and other personality measures needs to be clarified.

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APPENDIX A

NARRATIVE CODING SCHEMES AND EXAMPLES

Each episode is coded for the presence (score +1) or absence (score 0) of 11 Narrative Variables (See Table 1 above, from Adler et al 2017).

Coders rated a narrative response to four prompts: 1.) High point 2.) Low Point 3.) Turning point and 4.) Re-storied Low Point for each participant.

- Code each variable one at a time. This means code the stories for AGENCY, then code them for COMMUNION... etc.
- Code prompts independently (as in don't consult with anyone else until you're finished coding the story).
- Summary Scores for 11 Variables have a possible low of 0 and high of 4. Add scores for each variable to come up with a summary score for that variable. For example, if you have an *Agency* High point = 0, *Agency* Low point = 1 *Agency* Turning point = 1 and *Agency* Re-story = 1, that participant would receive a Total *Agency* score of 3 on *Agency*.
- To come up with your scores, use this method:
 - Read the definition for the variable you're coding in table one above.
 - If you're uncertain about how to code it, read every sentence of the definition and ask the question "Is this present in the current narrative?"
 - If the answer is yes to at least one of these sentences in the definition, then the variable is present in the story.

Example:

"A Peak experience in my life was when i got in to ____, it has always been a dream of mine to get into this school. my dad went here and he is someone i have always looked up to in my life so i wanted to follow in his foot steps. i wasn't always the smartest in my school or the top 10 so coming here just seem like a dream to me. However i worked my butt off and got in. this was the happiest day of my life. i had accomplished a dream of mine and i could see my future ahead of me and all the happy times to come. This was something that would be a major part of my life forever and a huge turning point for what i can become.i will always remember the day i got that letter saying i am a part of this amazing __family for life, just like my hero, my dad. "

Agency = 1 (see highlighted sentences for examples of Agentic statements)

Communion = present if the protagonist attempts to have a sense of togetherness with their environment or other people by trying to help, connect to, and care for others.

Example:

“A peak in my life was when I joined my sorority, Delta Gamma. I was so excited to finally become a part of something so big. This was super exciting. All of the girls in my sorority are super super super sweet. I am so glad to have joined something so amazing. I cannot wait for the next three years with some of the best girls out there. We have so many events coming up that are going to be super fun. We have already had quite a few that have been amazing so I can't wait to see what is in store for the future. This is definitely a peak experience.”

Growth Goals is present if the protagonist makes an intentional effort to guide their self-development in a positive direction, this is characterized by personal growth.

Example:

“During my Spring semester at _____, I had a life guarding job at the REC center that I absolutely loved. I made really strong friendships with my co-workers, and they helped me get through my last semester at Tech. I also was an officer for my club volleyball team at Tech. I felt in control of my life for once. One thing I constantly desire in my life is control. I freak out when I feel like outside forces are in control of my happiness. But in this moment of my life, I was the one in control. I had managed to find a happiness that didn't revolve around others. I had taken charge and pursued the things I wanted. This control was the high point in my life.”

Contamination, a point is present if the protagonist describes an event that moves from a good and positive scene to a bad and negative scene. The events are at first good but the transition to a bad outcome.

- NOTE: For the variables contamination and redemption, events could also represent emotions (e.g., happiness to sadness).

Example:

“A nadir I have had was when I received a really bad test grade. I studied for it really hard and thought I was super prepared. I went into test day with a lot of confidence. Once I got the test I read through the questions and I knew almost all of them. I turned in my test and knew I had gotten a high "A." A week later I checked ecampus just to see i had a test grade of 60. I was devastated. I thought for sure there was a mistake but no, there wasn't. This was an extremely low point in my life because I thought I was going to succeed, but turns out I didn't.”

Redemption = when an event transitions from a bad and negative scene to a positive scene. In order for redemption to be present, the bad event would have to be redeemed, salvaged, mitigated, or made better in light of the ensuing good.

Example:

“My entire middle school experience was a time of insecurity, guilt, and shame for me. My insecurities about my physical appearance and "popularity" caused me to crave attention and become very bitter. I called myself "emo" and listened to dark music, wearing dark clothing and generally identifying with the alternative community in order to feel as though I had a place. I struggled with an inner conflict over religious values; I grew up in church and desired to act

*right and be good, but I struggled with an addiction to pornography that caused me to resent the idea of God and wrestle with a conviction I always felt when I was at church. Abandoning my religious background, I fell deeper into insecurity and anger towards life. I was mean to people who I thought that made me look bad, and tried so hard to win the attention of those who I thought could make me look better. The lowest point that I reached during this time was a result of my sister. She had a friend over, and during the night they experimented with LSD. My sister had a bad trip and went insane, screaming and shaking and waking up myself and my parents. I was terrified, truly terrified, and my parents took turns interrogating me on whether I knew anything about their drug usage. I didn't. The event created massive conflict within our family and left me with an extreme aversion to any sort of mind-altering substance. To this day I don't even like to drink coffee. During the event, however, I used the cover of my sister's mistakes to confess to my mom all the secrets and shame I had been harboring. Confessing my pornography addiction was a landmark for me and resulted in me turning back to God with a clean slate. **I began pursuing God and really renewed my life after this point, never returning to pornography and starting a journey in which I became more confident in grounded in my identity, greatly improving my outlook on life.**"*

Positive Resolution = code as present if they describe coming to peace with a challenging event, or if they only describe the positive aspect of a challenging event (i.e. if they describe success rather than "coming to terms with...")

Example:

*"I have encountered a low point in my life which was when my grandmother's lung cancer had come back to haunt our family. Luckily everyone has been strong, **I am doing better with knowing that everyday she is getting better.**"*

Accommodative Processing is given a point if the protagonist has been forced to change their perspective due to a negative experience severe enough to make them realize that they (the protagonist) have to revise how they respond to the environment.

Example:

*"I fell in love with a girl from another school. She cheated on me and I learned so much from it. **I now know how to treat relationships and have learned how to truly love someone.**"*

Exploratory Processing can be seen when the protagonist makes an effort to analyze an experience in an attempt to learn from it. This is displayed by incorporating a change into their life story due to what was learned.

- NOTE: the most common error for exploratory processing is not taking under consideration that there has to be a change happening in their life story in order for the variable to be present.

Example:

*“A low point in my life story was during my junior year in high school when I fell for someone who I thought was interested in me. I had met this person overseas during my cousin's wedding and immediately thought he was attractive. During the trip others told me he was paying me a lot of attention and that he was probably in to me. Me being self conscious, I blew it off and avoided the situation. After the wedding when I was back home I decided to pursue the guy just to see if the other people were right. We communicated for 3-4 months, throughout which he flirted and kept my interest. I eventually started seeing a future with him only to be left looking like a fool. Neither of us outright expressed our feelings, but I'm fairly certain I was interested and he wasn't. I fell into a really deep hole pretty much blaming his lack of interest on my looks and personality. **Once we stopped talking is when I realized how much I'd let myself like him. I wouldn't say I loved him, though. It took me at least a month to get out of the slump I was in. Then I vowed to never fall into that kind of a situation again.**”*

If *Meaning Making* is present by any of the definitions (i.e. vague meaning, learning concrete lessons or gaining deep insights from an event) give the point.

Example:

*“A turning point in my life would be the time when I went a mission trip to Haiti. In Haiti, I participated in many activities, such as planting trees, painting houses, talking with the villagers, and teaching the Haitians about sanitation and hygiene. **Haiti really opened my eyes and allowed me to see my life in a different way.** Almost everyone that I met in Haiti had a positive outlook on life despite not having certain necessities. This notion, in a way, made me realized about how blessed I was. From that point on, I was more thankful for everything that I had in my life.”*

Coherence = when the protagonist introduces one or more characters into their life story and their actions are expressed, the story follows a sequence of goal-oriented actions that are usually in chronological order, emotions are defined from the protagonist and/or characters they introduce into their story, and the narrative is integrated into larger life themes and meanings.

- NOTE: due to coherence having the longest criteria out of the eleven variables, the presence of coherence can range anywhere from being vague to being certain that coherence is present.

Example:

*“My last high school years were not a high point in my life. I was screwed over by a lot of people and no one was truly themselves. Although I dreaded going to school everyday and had to refrain from confrontation, I learned a lot about myself. **I showed myself and the people who looked up to me how to stand up for what's right and not let anyone run over you. Their is always going to be bad in the world but its your choice to partake in it. I grew as a person and now understand how to be the bigger person.**”*

Points of decision making – for *Complexity*, if there are two or more emotions described, this counts as nuance (hence Complexity present - 1)

Example:

“A low point in my life would be when I found out that my grandmother's lung cancer had returned. It was most definitely devastating. I love her with all my heart, and she has motivated me and given me so much advice that the thought of losing her makes me sick to my stomach. She is a woman who has no filter and is going to be extremely blunt to any and everyone she encounters. Not hearing from her and her not be physically able to come to my graduation heartbreaking because she talked about coming and how excited she was to go to not be when the time came.”