INTERSUBJECTIVITY IN BORDERLINE PERSONALITY DISORDER:

NARRATIVE, IDENTITY DISTURBANCE,

AND BORDERLINE PERSONALITY TRAITS

by

Nathalie Lovasz

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APPROVAL

Name: Nathalie Lovasz

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Chair: Dr. Robert Ley
                       Associate Professor

                       Dr. Alexander Chapman
                       Senior Supervisor
                       Assistant Professor

                       Dr. Jack Martin
                       Supervisor
                       Professor

External Examiner: Dr. Michael Chandler
                        Professor Emeritus
                        Psychology Department
                        University of British Columbia

Date Defended :   June 24, 2009

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Abstract

Identity Disturbance as a Borderline Personality Disorder (BPD) symptom has received little research attention, despite its association with serious behavioural problems and treatment outcome. The aim of this study was to examine a theoretical model relating identity disturbances, narrative coherence and BPD traits. To this end, 193 undergraduate students completed on-line measures of BPD traits, narrative coherence, identity disturbances, affect intensity, thought suppression, dissociative experiences, and relationship instability. As expected, narrative coherence was negatively associated with both identity disturbances and BPD traits. Contrary to expectations, coherence did not mediate the relationship between BPD traits and identity disturbances. Instead, BPD traits mediated the relationship between coherence and identity. Among associated BPD features, only dissociative experiences were associated with narrative coherence and mediated the association of coherence with identity disturbance. These findings suggest that narrative coherence is related to BPD symptoms and identity disturbances and provide support for narrative theories of identity.

Keywords: Identity; Narrative; Borderline Personality Disorder; Coherence

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To Dr. Richard Walsh-Bowers, who taught me high standards.

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Personality Traits

As a psychiatric disorder associated with high rates of suicidal and self-harming

behaviours, substance abuse, and hospitalization, Borderline Personality Disorder is a

serious mental health problem that comes at a significant cost to those affected by it and

society as a whole. The symptoms of Borderline Personality Disorder (BPD) include

identity disturbances, which the DSM-IV-TR (2000) defines as "markedly and

persistently unstable self-image or sense of self." Some of the symptoms of BPD,

including impulsive and self-harming behaviours, as well as relationship and affective

disturbances, have been the focus of extensive empirical investigation in recent years.

Identity disturbances on the other hand, remain to be explored and better understood. The

aim of the present study was to test a theoretical model regarding the factors that

influence identity disturbances in BPD.

The Importance of Identity Disturbances in BPD

Identity Disturbance is a central feature of BPD that is related to other BPD

symptoms and associated with behavioural and treatment outcomes. In a variety of factor

analytic studies of BPD symptoms, identity disturbance was found to cluster with

symptoms of interpersonal instability (Clarkin et al., 1993; Taylor & Reeves, 2007),

impulsive and self-damaging behaviours (Blais et al. , 1997), and symptoms of affective

instability, including uncontrolled anger (Becker et al., 2006). As such, identity

disturbance is likely to co-occur with a number of other BPD symptoms such as unstable

affect, relationships and behavioural impulsivity, which affect individual's quality of life

in clear and direct ways.

In addition, along with the symptoms of affective instability and impulsivity, identity disturbance has been found to be strongly predictive of suicidal and self-harming behaviour among those with BPD (Yen et al., 2004). As these behaviours are related with adverse health outcomes and hospitalizations among those with BPD, understanding identity disturbance may thus be important in order to predict and understand the precursors of these symptoms. As well, those with BPD are often considered difficult to treat and therefore it is important to understand factors that contribute towards treatment outcomes. Of all BPD symptoms, identity and relationship instabilities have been found to be most predictive of treatment course (Hull, Clarkin, & Kakuma, 1993). Identity disturbances are thus of practical importance, because they are related to health and treatment outcomes of those with BPD.

Finally, identity disturbance plays an important role in the diagnosis of BPD and has been found to be among the most specific and sensitive symptoms of BPD. Depending on the diagnostic criteria and samples used, studies have found that identity disturbance is possibly highly specific and sensitive (Fossati et al., 1999; Grilo et al., 2007) but at the very least moderately sensitive (Modestin, Obseron, & Erni, 1998) and specific (Farmer & Chapman, 2002) in the diagnosis of BPD based on the criteria of the most recent fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 2000). Identity disturbance (unstable sense of self) was also found to enhance predictive power and increase correct classification of those who do and do not meet criteria for BPD from 92.5% to 95.9% in a community sample (Farmer & Chapman, 2002). In studies that employed older diagnostic criteria, identity disturbance was found to have moderate (Pfohl, Zimmerman, & Strengl, 1986) to

high sensitivity but low specificity (Widiger, Francis, Warner, & Bluhm, 1986) as a criterion of BPD. Further, in a study examining the symptoms of both BPD and Antisocial Personality Disorder (AsPD), which are often diagnostically difficult to distinguish, identity disturbance was found to be the second most specific symptom in distinguishing BPD from AsPD (Becker, Grilo, Anez, Paris, & McGlashan, 2005). Thus, identity disturbance plays a central role in distinguishing those with BPD from those without the disorder or with AsPD.

Despite its relative importance, compared to other BPD symptoms, identity disturbance has been scarcely researched and continues to be a poorly understood and least reliably diagnosed symptom of BPD (Widiger & Frances, 1987). Subsequently, further research on this symptom seems warranted.

Theoretical Conceptualizations of Identity Disturbances in BPD

Much of the published work on identity disturbances in BPD is theoretical in nature. A wide variety of theories regarding the nature and etiology of identity disturbances have been advanced. These theories can broadly be divided into three categories: developmental theories, social theories and narrative theories.

Developmental Theories

Most famously, Kernberg (1975, 1984) proposed that identity disturbances in BPD result from the defense mechanism of splitting. According to Kernberg, children often split the world into dichotomous categories, such as good and bad, but learn to integrate these opposites to view the world more holistically with normal development. People with BPD, however, tend to continue to split the world into opposites such as good and bad and are unable to integrate such opposites into a unified whole. As a result, persons with BPD lack a stable sense of other people and themselves, and experience

instability in their interpersonal relationships. Splitting also results in an unstable sense of self identity, as those with BPD continuously vacillate between seeing themselves as all good or bad depending on current actions and circumstances, but cannot integrate their own positive and negative aspects into a coherent sense of self.

Drawing on psychoanalytic and attachment theories, Adler and Buie (1979, 1982) proposed another developmental theory of identity disturbances in BPD. They argue that children gain a sense of self from consistent reflections (through interactions that reflect a stable and non-contradictory sense of the child's worth and identity to the child) by a primary caregiver. According to this theory, a child who is treated well by the primary caregiver will internalize a sense of being a good person who deserves to be treated well. Identity disturbances stem from a failure to maintain object constancy (a sense that people and objects continue to exist even when they are not visible or present) in representations of important objects including the caregiver and caregiver's reflection of the individual's sense of self. Among those with BPD, the ability to maintain representations is contingent on the physical presence of the object or person. As such, those with BPD are left with a highly unstable sense of self that is contingent upon the presence of attachment figures or objects.

A similar theory was proposed by Fonagy and colleagues (1991), based on their research with children who had been maltreated. They argue that children gain a sense of their own motivations and feelings through an understanding of others' motivations and feelings, especially those of their primary caregiver. Children who are maltreated by their caregiver(s) experience the actions of others as random, unpredictable and incomprehensible. Because they are unable to understand the feelings and motivations of

their caregiver(s), they view their own actions and feelings in a similar way and fail to develop the ability to form a coherent and stable sense of their own feelings and actions and who they are as a person.

Social-Biological Theories

More recently, a number of researchers, including Paris (1997) and Jorgenson (2006), have proposed a social theoretical explanation of identity disturbances in BPD. Paris (1997) broadly argues that personality disorders result from an interaction between biologically determined temperament or personality traits and the social structures within which an individual lives. In traditional societies, personality disorders are commonly disorders of 'overcontrol' as individuals' actions and roles in society are dictated by norms and social conventions and those who may be genetically more inclined to seek autonomy and self-definition find themselves ill-suited to these social conditions. Modern societies, in contrast value autonomy and self definition. Thus, changes in social structures and values, family structures, and role definition have brought about a shift to disorders of 'undercontrol' marked by impulsivity and instability. In the absence of socially dictated roles and rules, individuals less genetically inclined towards self-definition and self-control may be left with an unstable sense of who they are and an inability to regulate their behaviour, as it is commonly seen in disorders such as BPD.

Similarly, according to Jorgenson (2006), as social structures have deteriorated, people in society as a whole have been left without a sense of identity based on roles that are dictated by society through rules and conventions. While in past decades, an individual's role, values, and goals were provided by society through traditions and religion, the decline of these social structures in recent decades has diminished such

transmitted identities. This decline in traditional social structures that provide an identity, combined with a genetic or other vulnerability, leaves some persons unable to construct a stable sense of identity for themselves, resulting in symptoms such as identity disturbances and psychopathologies such as BPD.

Narrative Theories

A more recent approach to the conceptualization of identity disturbances in BPD as well as identity in general, draws on narrative theories of identity originally proposed by philosophers such as MacIntyre (1984), Taylor (1989), and Ricoeur (1990). Narrative, according to the Oxford English Dictionary, is "an account of a series of events, facts, etc., given in order and with the establishing of connections between them; a narration, a story, an account" (Oxford English Dictionary, 1989). Narrative theories of identity are based on the notion that personal identity is constituted by the narrative of a person's life and involves both the passive content of such narrative as well as the active process whereby a person creates such a narrative (Ricoeur, 1992).

Narrative is distinguished from identity in the same way as the author is distinguished from a story, with the two co-existing in a circular reciprocal relationship. While narrative contributes towards a person's sense of identity and in many ways provides the content on which people draw when they establish their sense of who they are, identity also shapes the narrative that a person creates and the relationship between narrative and identity is thus reciprocally interactive (Ricoeur, 1990). Therefore, narrative and identity are closely related but not identical constructs. Narrative is a tool in the establishment and conceptualization of identity. Identity is a description of who one is, usually based on adjectives, while narrative is a series of stories that one uses as evidence

for the traits one attributes to who one is. Taylor (1989) describes this as follows, "My life always has this degree of narrative understanding, that I understand my present action in the form of an 'and then'" (p. 47).

Psychologists have imported narrative theories of identity into various conceptualizations of identity in recent years (Bruner, 1986; Howard, 1989). If narrative and identity are closely and causally related, this has important implications for psychological research and treatment. If a causal link between narrative and identity were established, this could have implications for the treatment of identity related disorders. Although it may be difficult to change someone's identity, it seems much more possible to examine and reframe narratives, which may then change a person's sense of who they are. Such application of narrative theories to the understanding and treatment of psychopathology form the basis of the treatment approach of narrative therapy (Angus, 1996; Angus et al., 1999; Goncalves et al., 2000; Howard, 1991; etc.) and recent investigations into the roles of narrative in the development and treatment of depression, where self-identity is very negative (Levitt et al., 2000), as well as in eating disorders, where self-identity is excessively tied to body weight and tends to be distorted (Von Wyl, 2000).

Consistent with narrative theories, an additional attempt to explain the etiology of identity disturbances in BPD draws on recent investigations of the role of autobiographical narrative in the development of identity and psychopathology. For example, Levy et al. (2006) found narrative coherence was correlated with attachment style and reflective function among those with BPD and that, as participants became more securely attached and improved their reflective function through treatment with

Transference Focused Psychotherapy, their narrative coherence also increased. Yet, there has been no research directly examining the relationship between narrative coherence and identity disturbances in BPD. If narrative is closely tied to identity and plays a role in identity-related psychopathology, it seems conceivable that narrative may also play a role in identity disturbances in BPD. While narrative is not traditionally a focus of many treatments for BPD, if narrative disturbances are related to identity disturbances in BPD, attention to narrative coherence in treatment may aid in the amelioration of identity disturbance.

In line with this idea, Fuchs (2007) recently proposed a theoretical narrative model of identity disturbances in BPD (see Figure 1). According to Fuchs, three aspects of BPD symptoms lead to an inability to access or construct coherent narratives. First, impulsivity and affective dysregulation make memory highly state-dependent for those with BPD. Due to the intensity with which emotions are experienced and a tendency to suppress negative emotions, those with BPD are more likely to remember autobiographical instances that are concordant with their current affective state. Given the frequent shifts in affective states among those with BPD, and the often mood-dependent nature of memory, autobiographical memory is thus contingent on emotional states and shifts frequently. Secondly, experiences of dissociation, including derealization and depersonalization, commonly occur among those with BPD, are often accompanied by interruptions to short term memory (such that experiences that occur in a dissociated state are not remembered or only vaguely remembered), and leave those with BPD with vague memories of certain events, thus contributing to gaps in narrative. Finally, due to unstable relationships, those with BPD have few constant relationships with people who can
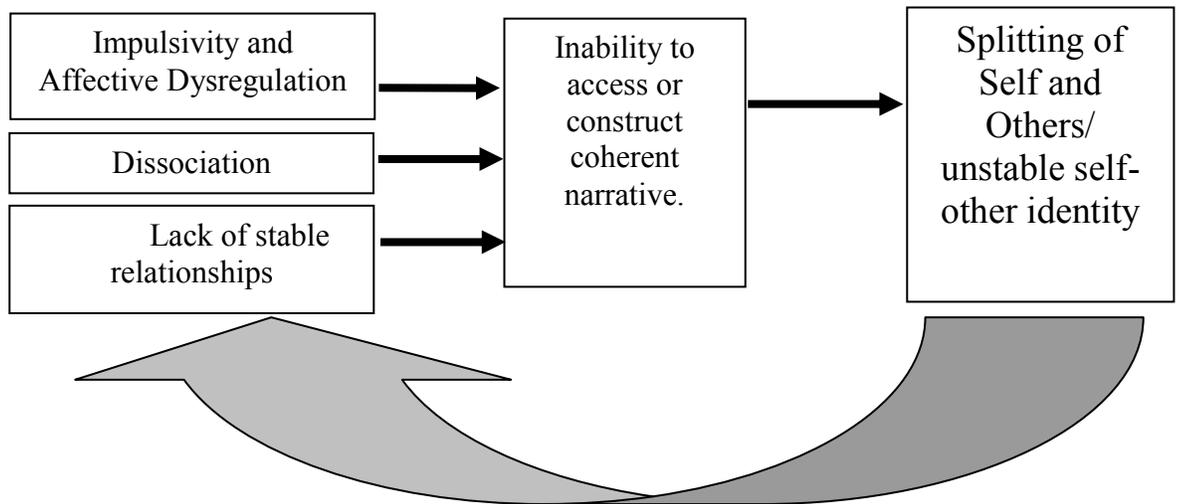
Figure 1. Fuchs' (2007) narrative model of identity disturbances in Borderline

Personality Disorder

provide them with consistent feedback and recollections of past autobiographical events, which further leaves them fragmented in their narratives. Because of these three factors, people with BPD are left with incoherent and fragmented narratives of themselves and others, unable to maintain a constant sense of self and others. They are unable to integrate new experiences into longstanding narratives and experience themselves and others as fragmented and disconnected elements anchored within the immediate moment, but with little continuity with past experience. Yet, although Fuchs' (2007) theory seems plausible, it has not been supported or validated by empirical research.

Empirical Research: Identity Disturbances in BPD

Identity disturbances in BPD have not been the focus of much empirical research to date. Koenigsberg et al. (2001) found that the defense mechanism of splitting was in fact related to identity disturbances in a sample of patients with a variety of personality disorders, thus providing some empirical support for Kernberg's theories. Other theories discussed above, however, have not been empirically tested.

In fact, even the exact nature of identity disturbances in BPD and the means by which these identity disturbances are best measured are still unclear and have only recently received some empirical attention. Wilkinson-Ryan and Westen (2000) investigated the nature of identity disturbances in BPD compared to other personality disorders and developed a specific measure of identity disturbance in BPD. In their study, clinicians rated 95 personality-disordered patients on a measure of identity disturbance (which the authors developed based on theoretical literature), as well as demographic background and experiences of sexual abuse. A factor analysis of identity disturbance ratings provided by clinicians on the measure of identity disturbance showed four main

types of identity disturbances among those with BPD. The first type of identity

disturbances was labelled 'role absorption' and broadly included the definition of the self

in terms of a single role (e.g., I am a mother and only a mother). The second type of

identity disturbance was labelled 'painful incoherence,' and was defined by a subjective

sense that one's identity is incoherent. This is distinct from the third type of identity

disturbance, 'inconsistence,' which includes objective inconsistence in thought, feeling,

and behaviour instead of subjective feelings of inconsistence. Finally, a fourth type of

identity disturbance entailed a lack of commitment to jobs and values. While all four

factors distinguished BPD patients from those without BPD, painful incoherence was the

most specific BPD identity disturbance and most strongly distinguished those with BPD

from those with other personality disorders.

When comparing the role of BPD diagnosis and childhood sexual abuse in

identity disturbances, the authors did find a strong relationship between experiences of

childhood sexual abuse and painful incoherence regardless of BPD diagnosis. Yet, a BPD

diagnosis accounted for variance in painful incoherence beyond that accounted for by

childhood sexual abuse, suggesting that this symptom is specific to BPD and not better

accounted for by experiences of sexual abuse. Wilkison-Ryan and Westen thus provided

some elucidation of the types of identity disturbances experienced by those with BPD and

explored etiological factors, showing that childhood sexual abuse may play a role in, but

cannot solely account for, the development of painful incoherence and other identity

disturbances.

Most recently, Jorgenson (2009) also examined identity styles among participants

with BPD and healthy controls, by examining the extent to which these groups differed

on an existing identity measure, the Identity Style Inventory. On this measure, BPD participants were more likely to have a diffuse avoidant identity style, marked by a context and affect dependent sense of identity, where identity questions are based on situational cues and active identity establishment through reflection is avoided. As well, fewer BPD participants than controls had an information seeking identity style (where one's sense of identity is actively established through reflection) or a normative style of identity (where identity is based on social norms and group affiliations). Finally, BPD participants were less likely to display commitment to particular values, goals, and ideals than non-BPD participants. Thus, the extant empirical research on identity disturbances in BPD establishes some differences between participants with BPD and controls on measures of identity but no definite consensus on the exact nature of identity disturbances in BPD or even the best way to measure them has been reached. Thus, additional research on identity disturbances as a symptom of BPD seems to be called for.

Research Questions and Hypotheses

The aim of the present research was to address gaps in the existing literature on identity in BPD and the role of narrative in identity. Specific aims of this research were: (1) To examine the relationship between narrative coherence and identity disturbances in general, as well as in relation to BPD traits; and (2) to investigate the ways in which a number of traits that are symptomatic of BPD (affect intensity, suppression of thought, dissociative experiences, and relationship instabilities) are related to narrative coherence and identity disturbances, based on a theoretical model proposed by Fuchs (2007).

My hypotheses were as follows. Hypothesis 1 was that narrative coherence would mediate the association of BPD traits with identity disturbance. Specifically, I hypothesized that those participants who were low in narrative coherence would display

greater identity disturbance and more BPD traits, and that the association of BPD traits with identity disturbance would be non-significant with narrative coherence in the model. This hypothesis was based on research and theory suggesting that coherent life narratives are essential in the development of a stable identity (e.g. Bruner, 1986; Ricoeur, 1990). Hypothesis 2 was that correlates of BPD (affect intensity, thought suppression, dissociative experiences, and relationship instability) would mediate the association of BPD traits with narrative coherence. Specifically, I hypothesized that BPD traits would be positively associated with the correlates noted above and negatively associated with narrative coherence, and that, with the correlates in the model, BPD traits would no longer be significantly associated with narrative coherence (based on Fuchs, 2007).

Method

Sample

For this research, BPD traits, narrative coherence, identity disturbances, and a number of traits (affect intensity, thought suppression, dissociative experiences, and relationship instability) were measured in a sample of 192 undergraduate students. Participants were recruited from the university undergraduate subject pool and received course credit in exchange for volunteering their participation. In order to participate in this study, participants had to be fluent in the English language (as was the case for all participants admitted into undergraduate studies in an institution where English is the language of instruction), and had to have access to a computer with internet access. There were no exclusion criteria for this study.

The sample size was determined based on a power analysis. To detect medium effect sizes ($d = .50$) for four predictors (the largest number of predictors used in any of the individual regression analyses) in a regression design with a power of .8 at $\alpha = .01$

according to Cohen (1992), a sample size of 118 is necessary. Given the likelihood of a

skewed distribution in this relatively high functioning university student sample, where

extreme BPD traits and identity diffusion tend to be present in only a small proportion of

participants sampled, as well as the possibility of loss of data during online transmission,

it was determined that a larger sample size may be needed. Hence, the 192 participants

recruited provided more than adequate power to test these hypotheses.

Demographically, participants ranged in age from 17 to 32 years of age with M_{age}

= 19.73 (SD = 2.28), and the sample included more females (67.2%) than males (32.8%).

Reflective of the larger student body at the undergraduate institution, the majority of

participants identified their ethnicity as Asian (44.3%) and White or Caucasian (31.8%).

Almost half of the participants (47.4%) reported that they were born outside of Canada

and the average age at which participants reported that they moved to Canada was 10.4.

As is typical for undergraduate student samples, the majority of participants reported that

they came from above average socio-economic backgrounds: Most participants (43.8%)

who chose to report their family's annual income (31.8% preferred not to report),

reported an annual income of >$50,000 and the majority of participants (53.6%) reported

that their parents completed at least an undergraduate university degree. Please see Table

1 for more detailed demographic data.

Procedure

Participants were provided with a link and password to a set of online self-report surveys.

They were instructed that they would only be able to access the surveys using their

password once, and had to complete the entire study at a single sitting, which would take

Table 1

Demographics

	n	%
Race/ethnicity		
Asian	85	44.3
White/Caucasian	61	31.8
South Asian (e.g. Indian, Pakistani)	31	16.1
South East Asian (e.g. Filipino)	9	4.7
Black/African Canadian	3	1.6
Aboriginal	2	1.0
More than One or Other	19	9.9
Gender		
Male	129	67.2
Female	63	32.8
Birthplace		
Canada	101	52.6
Outside of Canada	91	47.4
Family Income		
>$100,000	24	12.5
$50,000-99,999	60	31.3
$35,000-49,999	27	14.1
<$34,999	20	10.4
Prefer not to respond	61	31.8

	n	%
Religious Background		
Catholic	40	20.8
Other	37	19.3
Protestant	33	17.7
Atheist	24	12.5
Buddhist	17	8.9
Sikh	16	8.3
Muslim	16	8.3
Hindu	3	1.6
Not indicated	6	3.1
Highest Education Level Completed by Parents		
Did not complete High School	15	7.8
Completed High School	32	16.7
Some College/University	36	18.8
Completed University	69	35.9
Completed Graduate Degree	34	17.7

approximately two hours. They were told to complete the study when they would have 2 hours of undisturbed time in a private setting and to minimize interruptions and disturbances by turning off cell-phones, instant messaging programs, or any other electronic communication devices. All but two participants were able to complete the study in one sitting. Two participants were interrupted during their completion (one by a personal emergency and one because of computer problems) and completed the study during a second attempt.

Upon visiting the online link from any internet computer, participants were first provided with information about the research and asked to indicate their consent to participate. To ensure that participants had read the consent form, they were required to correctly respond to multiple choice questions about the consent form in order to continue their participation. Upon indicating consent to participate and correctly answering these questions, participants then responded to a number of self-report questionnaires administered online in randomized order by selecting or typing responses to the questions of each questionnaire. Following their response to these measures, participants completed a computerized version of MacAdam's Life Story Interview (LSI; McAdams, 1995), a set of open-ended questions requiring participants to type various stories about their life in narrative form. Following the completion of this measure, participants were thanked for their participation, provided with a number of crisis and support resources in case their participation had elicited emotional distress requiring such support, and provided with a link to a pleasurable activity (an online game) that was intended to serve as a positive mood induction to reduce any distress that participation may have elicited.

Measures

Participants provided basic demographic information, including their age, gender, geographic location, and mental and physical health history.

BPD traits. Participants completed the Borderline Features Scale sections of the Personality Assessment Inventory (PAI-BOR; Morey, 1991). This 24-item scale measures BPD symptoms as defined by the DSM-IV-TR on a 4-point scale (0 is "completely false" and 3 is "very true"). High scores represent a greater degree of BPD traits. The PAI-BOR has shown good psychometric properties when used to assess BPD traits in undergraduate samples (Chapman et al., 2008; Trull, 1995; 2001) and was found to have good internal consistency (α = .92) and test-retest reliability at a one month interval (r = .89) in a sample of undergraduate students (Chapman et al., 2008). Administered via online format, this measure demonstrated comparable internal consistency in the present sample (α = .88 see Table 2)

Affect intensity. Affect Intensity was assessed using the Affect Intensity Measure (AIM; Larsen, 1984), a 40-item self-report measure designed to assess intensity in emotional experience. Participants rate their agreement with various statements regarding the intensity with which they experience emotion on a six-point scale where 0 represents complete disagreement and 5 complete agreement. This measure has adequate psychometric properties and test-retest reliability has been found to be in the .8 ranges at one-, two-, and three- month intervals (Larsen, 1984). Internal consistency for this measure in the present sample was excellent (α = .88)

Thought suppression. Suppression of unwanted thoughts was measured using the White Bear Suppression Inventory (WBSI; Wegner & Zanakos, 1994), a 15-item self-

Table 2

Descriptive Statistics and Internal Consistency of Measures

	Mean (SE)	Skew (SE = .18)	Kurtosis (SE = .35)	Internal Consistency
PAI-BOR	26.82 (11.40)	.80	1.43	.88
PAI-BOR-I	7.71 (3.63)	.31	-.36	.68
PAI-BOR-IR	19.11 (8.82)	.28	-.58	.87
Coherence	13.10 (1.53)	-1.10	2.36	.78
Narrative	5.05 (.75)	-.85	1.13	.68
Gricean	2.71 (.32)	-.40	3.28	.28
Lexical	3.78 (.82)	-.72	1.86	.65
Grammatical	3.96 (.14)	-4.82	26.96	.58
Episodic	.31 (.26)	.67	-.35	.02
FIS	3.74 (.72)	-.35	-.14	.94
IDS	2.21 (.69)	.39	-.44	.85
IDQ	2.17 (.84)	.96	.66	.94
ID Composite	.01 (1.76)	.48	-.44	.94
AIM	146.81 (19.93)	-.03	.19	.88
WBSI	47.70 (11.96)	.59	.20	.92
DES	14.56 (1.81)	1.38	2.34	.93
LogDES	1.03 (.39)	-.98	1.40	n.a.
IIP	1.22 (.55)	.42	-.19	.95

report measure where participants are asked to indicate their agreement with statements indicating a tendency to suppress unwanted thoughts on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Higher scores indicate a greater tendency to suppress unwanted thoughts. This measure has been found to have good test-retest reliability at 3-months ($r = .80$) and high internal consistency ($\alpha = .89$) in past studies (Cheavens et al., 2006) as well as in the present study ($\alpha = .92$)

Dissociative experiences. Experiences of Dissociation were assessed using the Dissociative Experience Scale (DES-II; Carlson & Putnam, 1993), a 28-item self-report measure of the frequency and intensity with which participants have experiences that could be classified as dissociative. Participants are asked to indicate the percentage of time during which they experience various dissociative symptoms on a ten-point scale (in ten-percentage point increments). Higher scores indicate a greater amount of dissociative experiences. This scale has been shown to have good psychometric properties with an internal consistency of $\alpha = .90$ and test-retest reliability of $r = .84$ at 1-2 months intervals (Carlson & Putnam, 1993). In the present sample, internal consistency for this measure was excellent ($\alpha = .93$).

Relationship instability. Relationship Instability was measured using the Inventory of Interpersonal Problems (IIP-64; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1998), a 64-item self-report measure of current interpersonal distress. This measure assesses Interpersonal Distress on a five-point Likert scale. It yields a total score and eight subscale scores. High scores indicate greater interpersonal distress. This measure has been found to have good psychometric properties (Internal consistency > $\alpha =$

.80) in a sample of university students (Lejuez et al., 2003) and in the current sample (α = .95).

Identity disturbances. To measure Identity Disturbances participants completed the Functions of Identity Scale (FIS; Serafini, Maitland, & Adams, 2006), a 15-item self-report measure that assesses five proposed functions of identity based on the identity model by Adams and Marshall (1996 cited in Serafini, Maitland, & Adams, 2006). These include "the structure for understanding who one is (Structure); meaning and direction through commitments, values and goals (Goals); a sense of personal control and free will (Personal Control); consistency, coherence, and harmony between values, beliefs and commitments (Harmony); and the ability to recognize potential in the form of future possibilities and alternative choices (Future)" (Serafini, Maitland, & Adams, 2006, p.1). These functions were measured by asking participants to rate on a 5-point Likert scale how well a number of statements describe them (ranging from 1 = *never* to 5 = *always*), resulting in five functions scores for each participant. The five scales have been found to have adequate internal consistency, ranging from α = .65-.82 (Serafini, Maitland, & Adams, 2006). By examining the presence of identity stability based on five domains, this scale provided information about the domains of identity in which those with high BPD traits experience greater impairment or attain lower scores. This measure had good internal consistency in this study (α = .94)

Participants also completed the Identity Distress Survey (IDS; Berman, Montgomery, & Kurtines, 2004). The Identity Distress Survey is a 10-item self-report measure of Identity Distress that was originally developed based on the DSM-III criteria for Identity Disorder. Participants rated the extent to which they have experienced

distress about a variety of domains of identity as well as the discomfort and interference with life caused by distress in these domains on a 5-point Likert scale ranging from 1 ("none at all") to 5 ("very severely), together with the length of time they have experienced these symptoms. The scale can be used as a continuous measure of identity distress and has good psychometric properties. Internal consistency has been reported as $\alpha = .84$ with test-retest reliability of $r = .82$ (Berman et al., 2004). In the present study, the Identity Distress Survey provided a well-established index of identity distress rather than a general measure of a positive sense of identity. It was thus included to measure the extent to which a distressing absence of identity instability is experienced by participants and provides a negative measure of absence of stability rather than a positive measure of presence of stability. It was found to have good internal consistency in the present sample ($\alpha = .85$)

Finally, participants completed a modified self-report version of the Identity Disturbance Questionnaire (IDQ; Wilkinson-Ryan & Weston, 2000). This measure consists of 35 statements, rated on a 7-point Likert scale (1= not true at all, 7= very true). Higher scores on this measure indicate greater identity disturbance. The IDQ has been found to have good internal consistency on all four factors ($\alpha = .82$-.9). Test-retest reliability for this measure has not yet been established (Wilkinson-Ryan & Weston, 2000). This measure allows for the assessment of disturbances on four empirically derived factors (role absorption, painful incoherence, inconsistency, lack of commitment) and is unique in its empirical rather than theoretical foundation. Although this measure was designed as a therapist rating measure and statements are thus worded for this purpose, the wording of items was changed from third to first person to allow for use as a

self-report measure. This measure was used on an exploratory basis. It is a unique

measure that warrants further use and exploration, given that it has been successfully

used to discriminate between those with and without a diagnosis of BPD in the past. It

had good internal consistency ($\alpha = .94$) and predicted unique variance in BPD traits

above and beyond that accounted for by the other measures.

Narrative coherence. Narrative coherence was measured using MacAdam's Life

Story Interview (LSI; McAdams, 1995), an open-ended interview in which participants

are asked to retell their life as a story. First, participants were asked to divide their life

into chapters, and then tell narratives about eight specific life events. They were also

asked to provide two alternate endings (one positive and one negative one) for their

overall life story future, and to answer questions regarding their beliefs and narrative

experiences. Finally, participants were asked to describe a theme that runs throughout

their life story.

This measure has been widely used in narrative research and is usually intended

to be used as an open-ended, semi-structured interview. For the purpose of the present

study, this measure was administered on a computer screen to enhance standardization of

administration, and participants were asked to type their responses. Participants were

provided with the instructions for the interview in a written format. Textboxes were

provided following each set of instructions and participants typed their responses. While

this procedure did not allow for additional probing questions as would be the case in

interviews, most participants responded with adequate detail and in a relatively informal

manner. As such, participants' responses appeared comparable to interview responses.

Participants' narratives about eight specific events in their lives were coded for narrative coherence using Katz's (1999) coding scheme for coherence coding, a coding scheme with 23 dichotomously rated items on five scales with 2-7 items each. For this coding scheme, coherence of stories is evaluated on five scales (Narrative coherence, Gricean coherence, Lexical coherence, Grammatical coherence, and Episodic coherence), each with 2-7 items. The Narrative coherence scale measures the extent to which a story includes conventional components of a coherent narrative, with a character, scene, beginning, middle and end, forecasts what is to follow, and fulfills readers' expectations. Gricean coherence concerns the extent to which information contained in a story is necessary and sufficient. Lexical coherence is determined by the extent to which particular cues such as spatial or temporal cues, that allow the audience to understand the relationship between parts of a story, are used. Grammatical coherence concerns the extent to which errors in the conventional use of language (e.g. grammatical or spelling errors) interfere with the understanding of a story. Finally, episodic coherence assesses coherence between various stories written by the same author, which is enhanced by references to previous stories or writing cues. For the present study, analyses were conducted using a total coherence score based on all scales.

This coding scheme has been successfully used in the past to rate narrative coherence of essays about positive and negative life experiences written by undergraduate university students, with interrater agreement of .71 and .8 (Boals, Klein & Banas, 2001). Coherence as determined by this measure has been found to be correlated with the use of cognitive causal language, which has been found to be a marker of narrative coherence (Pennebaker & Francis, 1996). Scores on this scale have also been

found to predict health center visits for students asked to write about positive or negative life experiences (students assigned to write about a positive life experience had fewer subsequent health center visits if their stories were more coherent, while students writing about a negative life experience had more subsequent health centre visits if their stories were more coherent), providing some evidence of its predictive validity (Boals, Klein & Banas, 2001).

In the present study, the internal consistency was satisfactory for the coding scheme as a whole ($\alpha = .78$), but inadequate for some of the subscales (see Table 3), which may be reflective of the relative heterogeneity of individual items on each subscale (e.g., one would not necessarily expect that there would be a relationship between whether a story has a beginning and whether it has a character, as the relationship between these components is one of social convention in that both are thought to be part of a coherent narrative. The present study does not seek to make claims about a unified underlying construct of coherence that leads to the presence of these components, but rather assumes a conceptual social understanding of these constructs. Based on the lack of internal consistency within subscales, however, it was decided that an analysis of subscales was not warranted and that analyses would be based on total coherence scores for each participant.

Raters read responses to each Life Story Interview question and rated items dichotomously (absent/present) for each of these five scales. Scale scores were generated by adding up the scores for each item on each scale. Participants' scores on each scale were then averaged across the eight stories they produced to yield coherence scores on each scale for each participant. Three raters (2 MA students and one PhD student

including the author) were trained for reliability in coding for narrative coherence. Every tenth story was coded by consensus to minimize rater drift. Interrater reliability was measured for a random selection of 10% of the independently coded cases. Intraclass correlations (ICCs) for all three raters generated for each scale were as follows: .79 (Narrative coherence), .63 (Gricean coherence), .76 (Lexical coherence), .78 (Grammatical coherence), and .80 (Episodic coherence). Satisfactory interrater agreement could not be reached on the 3-item Gricean coherence scale, and since internal consistency for this scale was also low ($\alpha = .28$), this scale was dropped from the analyses for this study.

Data Analyses and Results

Preliminary Analyses

Descriptive statistics and distribution properties. Descriptive statistics were used to assess central tendency and variance for all variables (see Table 2 for Descriptive Statistics). From the construction of 95% confidence intervals around the skew and kurtosis statistics for each of the three identity measures and PAI scores, it appeared that scores on the IDS and IDQ were slightly positively skewed but kurtosis for all variables was normal. For coherence scores, skew was normal but the data were slightly leptokurtic. However this deviation from normality was minimal and likely would be resolved by a slightly larger sample size. Finally, affect intensity scores appeared to be normally distributed. Scores on the WBSI were found to be slightly negatively skewed and scores on the IIP were very slightly positively skewed (see Table 2). However, kurtosis was normal for both of these variables and thus this data still appeared to be relatively normally distributed. Scores on the Dissociative Experience Scale were found to be substantially positively skewed and leptokurtic. This may have been the result of

the low base rate of severe or frequent dissociation in a high functioning undergraduate sample. A logarithmic transformation was thus used to bring these data closer to a normal distribution. This transformation succeeded in bringing these data much closer to normal skew and kurtosis, and all analyses were thus conducted using log transformed DES scores. The assumptions of linear regression were checked for each analysis using visual inspection of histograms and normal probability plots of residuals the Durbin Watson test statistic and multicolinearity statistics and no evidence for violations was found. Leverage statistics were examined for outliers and no outliers were found to be influential observations that had to be dropped from the analysis.

Missing and incomplete data. During online administration, missing responses were automatically detected and participants were given a chance to return to measures to enter missing responses. Subsequently, only one participant did not complete the PAI-BOR in its entirety. Given the central role that scores on this measure play in the current study, as no data on BPD traits was available for this participant, the participant was dropped from all further analyses. In addition, one participant however omitted all responses on the measure of thought suppression and thus had to be excluded from analyses involving that variable. Complete datasets were available for all other self-report measures for all remaining 191 participants.

On the online interview measure of narrative coherence, 5 participants did not write at least one of the eight stories they were asked to write and consequently, data were missing for between one to three stories for each of these participants. In addition, some participants provided a number of very short responses ranging from a few words to one sentence, that were difficult to score and code for coherence due to their brevity.

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Given the nature of this task, it is possible that failure to produce the eight stories participants were asked to produce might be meaningful, as such failure (in itself) could reflect a lack of narrative coherence. At the same time, given the fact that participants completed this study for course credit, brief or missing stories could also reflect a simple lack of engagement with the task. In addition, an examination of descriptive statistics of the word length of participants' responses showed that despite the fact that instructions to all participants were standardized, the length of participants' responses varied widely (M = 2411.98, SD = 961.78). Rather than dropping participants based on whether they had completed all stories or not, and to remain consistent and objective while avoiding confounding of coherence with lack of adequate task engagement, a minimum word length for valid responses was set. Participants whose responses were in the lowest 5th percentile in word length (<1042 words) were dropped from the analysis. This eliminated 9 participants and further reduced the sample size to n = 182. An independent samples t-test was conducted to examine whether the dropped participants differed significantly from the remaining sample on measures of Identity Disturbance and BPD traits. No significant differences in identity disturbance were found between dropped participants and those that remained in the data set, t (189) = 1.43, p = .16. Participants that remained in the data set had significantly higher scores on the PAI-BOR, t (189) = 2.04, p = .04, which was likely a reflection of the greater likelihood that participants with unusually high BPD scores would be found in the larger retained group. Dropped participants thus did not display greater levels of identity disturbances or BPD traits and the length of their stories is unlikely to be reflective of greater levels of disturbance or pathology.

Intercorrelations of identity measures with BPD traits. As there is no established

way to measure identity disturbance in BPD, and many identity measures include items

pertaining to different aspects of identity disturbance, three identity measures were

included in the present study. A series of analyses were then conducted to examine their

relationship with BPD traits.

In order to examine the relationships between the three identity measures and

BPD traits, zero-order correlations between pairs of identity measures, and each measure

and PAI scores were calculated (see Table 2 for correlation statistics). PAI scores were

significantly negatively correlated with scores on the FIS ($r = -.45$, $p < .001$), the only

positive measure of identity. PAI scores were also significantly positively correlated with

scores on the IDS ($r = .62$, $p < .001$), and the IDQ ($r = .66$, $p < .001$). Thus, participants

with a greater number of BPD traits also displayed lower identity stability on the FIS and

greater identity disturbances on the IDS and IDQ. In addition, all identity measures were

significantly correlated with each other (see Table 3).

To determine whether all three measures contributed unique variance to the

prediction of BPD traits, the measures were simultaneously regressed onto PAI scores

($R^2 = .59$, p $< .001$). Both the IDS ($t = 5.76$, $p < .001$, $\beta = .35$) and IDQ ($t = 6.66$, $p < .001$,

$\beta = .42$), but not the FIS ($t = -1.70$, $p = .09$, $\beta = -.10$), accounted for unique variance in

BPD traits (see Table 4).

As identity disturbances are a symptom of BPD, the foregoing correlations may

reflect the overlap between BPD symptoms and some of the content on the Identity

disturbance measures (the PAI-BOR contains an Identity Problems subscale). In order to

Table 3

Hypothesis 1 Correlation Table: Identity Measures and PAI-BOR scores

	PAI-BOR	FIS	IDS	IDQ
PAI-BOR	1	-.45*	.62*	.66*
FIS	-.45*	1	-.42*	-.49*
IDS	.62*	-.42*	1	.55*
IDQ	.66*	-.49*	.55*	1

* = *p* <.001

Table 4

Hypothesis 1 Regression Table: Identity Measures and PAI-BOR Scores

	B	Std. Error	*β*	*t*	*Sig.*	Model R^2	*F*	*Sig.*
Constant	7.58	4.94		1.53	.13	.54	72.89	< .001
FIS	-1.56	.92	-.10	-1.70	.09			
IDS	5.73	1.00	.35	5.80	< .001			
IDQ	5.72	.86	.42	6.70	< .001			

determine if construct overlap accounted for the correlations above, I removed the identity problem subscale from PAI-BOR scores for each participant, recalculated the total PAI score, and then repeated the above analyses using these new scores. The correlations were significant between PAI-BOR scores and scores on the FIS ($r = -.38$, $p < .001$), the IDS ($r = .56$, $p < .001$), and the IDQ ($r = .61$, $p < .001$). In addition, in the simultaneous regression analysis ($R^2 = .44$, $p < .001$), both the IDS ($t = 4.74$, $p < .001$, $\beta = .32$) and IDQ ($t = 5.84$, $p < .001$, $\beta = .41$), but not the FIS ($t = -.85$, $p = .40$, $\beta = -.06$) accounted for unique variance in BPD traits. Therefore, the associations of BPD traits with identity disturbances does not appear to be accounted for by the presence of identity items in the PAI-BOR. As all identity measures were found to have good psychometric properties and were also highly correlated, and both the IDS and IDQ were found to account for unique variance in the outcome variable, for the purpose of the following analyses, I created a composite score by converting scores on the IDS and IDQ into z-scores and using their mean as an Identity Disturbance composite in subsequent analyses.

Examination of potential covariates. Given the written administration of the Life-Story Interview, it is possible that narrative coherence was confounded by the lengths of participants' responses. Response lengths were recorded, and responses that were too short to code were dropped from the analyses (see Missing and Incomplete Data). Participants were also asked to indicate age and gender, as older participants may have more life experiences and greater temporal distance to childhood memories and there may be gender differences in the kind of stories that are remembered and how they are retold. To examine these potential confounds, I examined zero-order correlations between coherence scores and age, gender, and word length of responses. There were significant

correlations between coherence and word length ($r = .56, p < .001$), and gender ($r = -.18$, $p < .001$). The correlation, of age with coherence, however, was non-significant, $r = -.05$, $p = .48$. Therefore, in all analyses where coherence was entered as an independent variable, I controlled for word length and gender.

Hypothesis 1: Narrative Coherence, BPD Traits, and Identity Disturbance

To examine the relationship between coherence, Identity Disturbance, and BPD traits, a series of Ordinary Least Square Multiple Regression analyses were performed (based on Baron and Kenny, 1986) to examine the correlations between these variables. To examine the correlation between narrative coherence and identity disturbance, PAI-BOR scores were regressed onto Identity composite scores. Consistently with the hypothesis, the regression of PAI-BOR score onto identity composite scores showed that PAI-BOR scores were significantly and positively associated with identity disturbance, $t = 14.02, p < .001, \beta = .72$. As hypothesized, coherence was also significantly and negatively associated with identity disturbance, $t = -2.71, p < .001, \beta = -.24$. In addition, PAI-BOR scores were significantly and negatively associated with the coherence of life narratives, $t = -2.36, p = .02, \beta = -.14$.

To test Hypothesis 1, both BPD trait scores and coherence scores were regressed onto identity composite scores while controlling for the extraneous variables previously specified ($R^2 = .53, p < .001$). I hypothesized that the partial regression coefficient for the relationship between BPD traits and Identity Disturbance would become non-significant when controlling for narrative coherence. The findings, however, were contrary to this hypothesis: BPD traits remained significantly associated with identity disturbance when controlling for narrative coherence, $t = 13.59, p < .001, \beta = .71$, yet narrative coherence

was no longer significantly associated with identity disturbances when controlling for

BPD traits, $t = -1.43$, $p = .15$, $\beta = -.09$ (see Figure 2). In light of this finding, I examined

the relationship between coherence and BPD traits by regressing coherence scores onto

PAI-BOR scores and found that coherence scores were significantly associated with BPD

traits, $t = -2.36$, p $= .02$, $\beta = -.21$. This pattern of findings suggested that BPD traits might

have fully mediated the association of coherence and Identity Disturbance. Indeed, a

Sobel test indicated that this mediation effect was significant, $z = -2.32$, $p = .02$.

Although previous analyses indicated an association of PAI-BOR scores with

identity disturbance even when these PAI-BOR scores were calculated without the

identity disturbance items (see Preliminary Analyses), it was still possible that PAI-BOR

scores functioned as a mediator primarily because they include identity disturbances.

Therefore, I repeated the above analyses with PAI-BOR scores calculated without the

identity disturbance items (PAI-BOR-IR), as well as with the PAI-BOR Identity

Problems scale (PAI-BOR-I) alone. For the analysis of PAI-BOR-I scores, findings

indicated a significant association of PAI-BOR-I scores with identity composite scores (t

$= 13.88$, $p < .001$, $\beta = .69$) but not with coherence ($t = -.37$, $p = .71$, $\beta = -.03$); thus there

was no evidence of a mediation effect of PAI-BOR-I scores (see Figure 3).

In contrast, PAI-BOR-IR scores were significantly associated with coherence ($t =$

-2.90, p $< .001$, $\beta = -.26$) and Identity composite scores ($t = 12.32$, $p < .001$, $\beta = .67$), and

PAI-BOR-IR scores fully mediated the relationship between coherence and identity

composite scores ($t = -1.07$, $p = .29$, $\beta = -.08$). A Sobel test confirmed this complete

mediation, $z = -2.80$, $p < .001$ (see Figure 4).
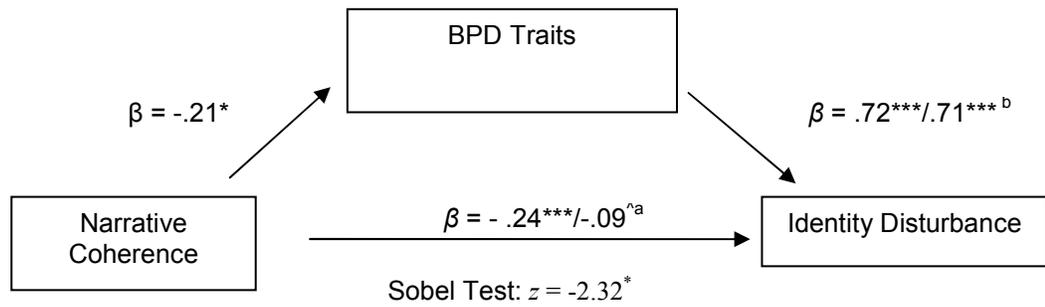
BPD Traits

β = -.21*

β = .72***/.71*** [b]

Narrative
Coherence

β = - .24***/-.09[^a]

Identity Disturbance

Sobel Test: $z = -2.32^*$

[a] Value with *BPD Traits* in the model.

[b] Value with *Narrative coherence* in the model.

*p < .05 **p < .01 ***p < .001 [^]p > .05

Figure 2. The full mediation of the relationship between coherence and Identity

Disturbances by BPD traits measured by the Borderline scale of the PAI.

Identity Problems (PAI-BOR-I)

$\beta = -.03$^

$\beta = .69^{***}/.67^{***b}$

Narrative Coherence

$\beta = -.24^{***}/-.22^{***a}$

Identity Disturbance

Sobel Test: $z = .34$^

[a] Value with *Identity Problems* in the model.

[b] Value with *Narrative coherence* in the model.

*$p < .05$ **$p < .01$ ***$p < .001$ ^$p > .05$

Figure 3.The absence of significant mediation of the relationship between coherence and

Identity Disturbances by the Identity Problem subscale of the PAI.

Figure showing a mediation model:

- Box: **BPD Traits without Identity Problems** (top center)
- Box: **Narrative Coherence** (left)
- Box: **Identity Disturbance** (right)

Path from Narrative Coherence to BPD Traits without Identity Problems: $\beta = -.26^{***}$

Path from BPD Traits without Identity Problems to Identity Disturbance: $\beta = .67^{***}/.64^{***\ b}$

Path from Narrative Coherence to Identity Disturbance: $\beta = -.24^{***}/-.08^{\wedge a}$

Sobel Test: $z = -2.80^{***}$
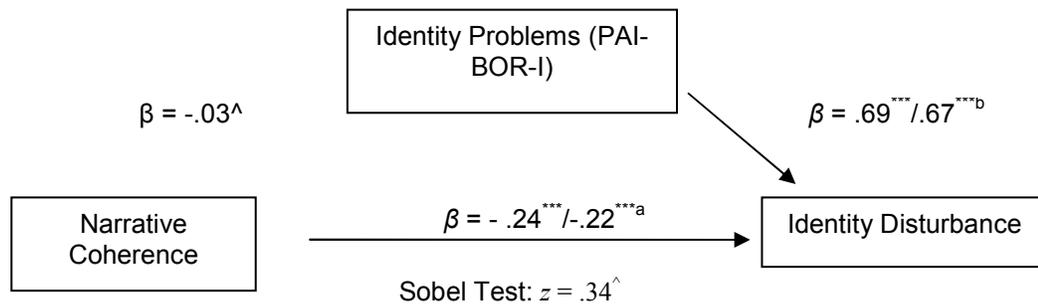
[a] Value with *BPD Traits* in the model.

[b] Value with *Narrative coherence* in the model.

$*p < .05$ $**p < .01$ $***p < .001$ $^{\wedge}p > .05$

Figure 4. The full mediation of the relationship between coherence and Identity

Disturbances by BPD traits other than identity problems measured by the Borderline

scale of the PAI.

Hypothesis 2: Affect Intensity, Thought Suppression, Dissociative Experiences, and Relationship Instability as predictors of Narrative Coherence

A series of multiple regression analyses was conducted to examine the association of affect intensity, thought suppression, dissociative experiences, and relationship instability with coherence. Scores on any measures of these symptoms that were found to be significantly associated with coherence were then regressed onto PAI-BOR scores along with coherence, to examine whether these four symptoms mediate the relationship between coherence and BPD traits, and the identity composite, to examine whether they mediate the relationship between coherence and identity.

Coherence scores were found to be significantly correlated with dissociative experience scores, $t = -2.28$, $p = .02$, $\beta = -.20$. There were no significant relationships between coherence and interpersonal instability scores, $t = -1.35$, $p = .18$, $\beta = -.12$, thought suppression, $t = -1.70$, $p = .09$, $\beta = -.15$, or affect intensity, $t = -1.54$, $p = .13$, $\beta = -.14$ and these variables thus cannot mediate the relationship between coherence and BPD traits or coherence and identity.

There was a significant correlation between DES scores and PAI-BOR scores, $t = 8.06$, $p < .001$, $\beta = .52$. When DES scores were regressed onto PAI-BOR scores along with narrative coherence, DES scores continued to account for a significant proportion of the variance in PAI-BOR scores when controlling for coherence, $t = 7.73$, $p < .001$, $\beta = .51$, but coherence scores no longer accounted for a significant amount of the variance in BPD traits when controlling for dissociative experiences, $t = -1.38$, $p = .17$, $\beta = -.11$. A Sobel test, however, indicated that the change in the magnitude of the association between coherence scores and BPD traits was non-significant, $z = 1.67$, $p = .10$ (see Figure 5).

Affect Intensity

β = -.14^

Inter-personal Instability

β = -.12^

Thought Suppression

β = -.15^

Narrative Coherence

β = -.20*

Dissociative Experiences

β = .52***/.51*** [b]

β = - .24***/-.11^[a]

BPD Traits

Sobel Test:
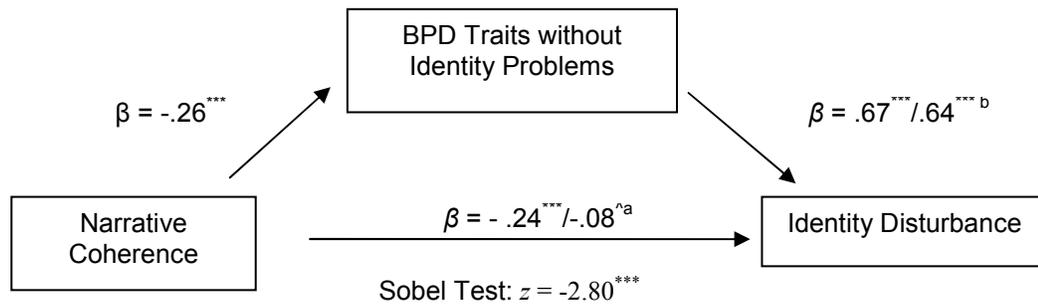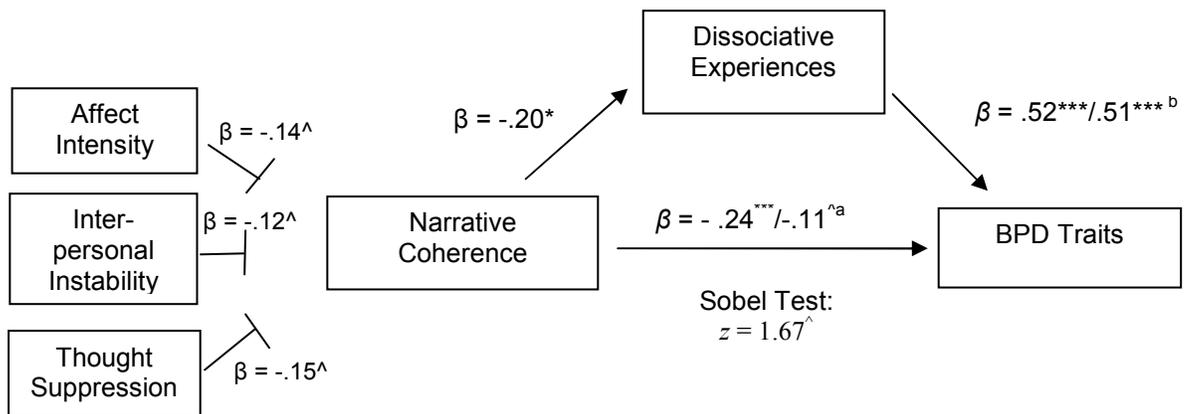$z = 1.67^\wedge$

[a] Value with *Dissociative Experiences* in the model.

[b] Value with *Narrative coherence* in the model.
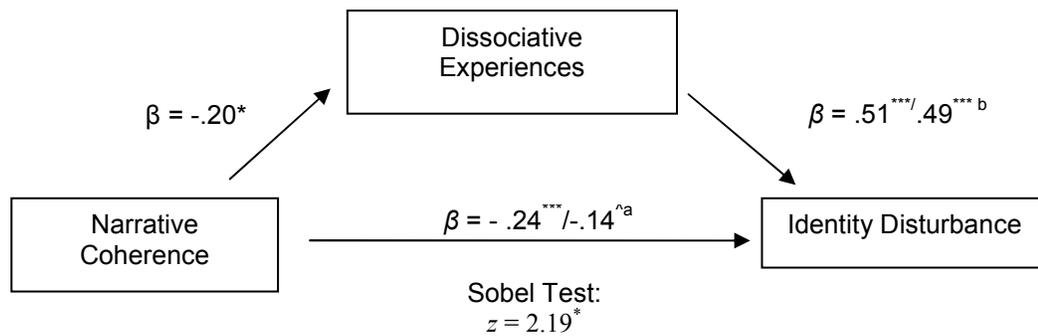
*p < .05 **p < .01 ***p < .001 ^p > .05

Figure 5. The absence of significant mediation of the relationship between coherence and

BPD traits by Dissociative Experiences, Affective Intensity, Interpersonal Instability and

Thought Supression.

Dissociative experience scores were also regressed onto identity composite scores. DES scores were found to be positively correlated with identity composite scores, $t = 7.78$, $p < .001$, $\beta = .51$. Both coherence and dissociative experiences scores were then regressed onto identity disturbance scores. Dissociative experiences continued to significantly predict identity disturbances when coherence was controlled for, $t = 7.42$, $p < .001$, $\beta = .49$, but coherence no longer significantly predicted identity disturbances when dissociative experiences were controlled for, $t = -1.80$, $p = .07$, $\beta = -.14$. Dissociative experiences fully mediated the relationship between coherence and identity disturbances (see Figure 6). A Sobel test confirmed that this mediation was significant, $z = 2.18$, $p = .03$.

Discussion

Identity disturbance is an important but understudied symptom of BPD. The dearth of empirical research on identity disturbances may be in part due to the elusive nature of the concept of identity. There is little consensus about the way in which identity is formed or maintained. In recent decades, it has been theorized that the ability to tell a coherent life narrative may be connected to a person's sense of identity. Those who can draw on coherent stories about their lives can use these stories to inform their sense of who they are as a person (MacIntyre, 1984; Ricoeur, 1990; Taylor, 1989; Bruner, 1986; Howard, 1989). Subsequently, it has also been proposed that narrative coherence may be related to a number of BPD symptoms, and may be one of the factors that explains or maintains identity disturbances among those with BPD (Fuchs, 2007). Yet, these theories have not been examined empirically. Therefore, the primary purpose of this study was to examine narrative coherence as a potential mechanism underlying the association of BPD

Dissociative Experiences

β = -.20*

Narrative Coherence

β = - .24***/-.14$^{\wedge a}$

Sobel Test:
$z = 2.19^{*}$

β = .51***/.49$^{*** \ b}$

Identity Disturbance

[a] Value with *Dissociative Experiences* in the model.

[b] Value with *Narrative coherence* in the model.

*p < .05 **p < .01 ***p < .001 $^{\wedge}$p > .05

Figure 6. The full mediation of the relationship between coherence and Identity

Disturbance by Dissociative Experiences.

traits with identity disturbances.

Findings from the present research supported the hypothesis that narrative coherence is related to both BPD traits and identity disturbances. As predicted, participants who produced less coherent life narratives reported a greater degree of identity disturbance and participants who had more BPD traits produced less coherent life narratives and had more identity disturbance. These findings are consistent with and provide empirical support for the basic premise of narrative theories of identity. There is a positive relationship between a person's ability to tell a coherent life story and their sense of who they are. They are also consistent with Fuchs' theory that narrative, coherence and BPD traits are related, such that those with more BPD traits have less coherent narratives and a less coherent sense of who they are. The relationship between these three variables is also consistent with past empirical research that has found that identity disturbances in BPD tend to be marked by a subjective sense of incoherence (Wilkinson-Ryan & Westen, 2000) and an identity style marked by an avoidance of commitment to an identity style and a context-dependent sense of identity (Jorgenson, 2009). Along with the findings regarding narrative coherence in the present study, this suggests that identity disturbances in BPD can be broadly related to a lack of active construction of meaning (in the form of narratives or commitment to goals and values) and a subsequent failure to grasp a sense of who one is (subjective incoherence), rather than necessarily objective inconsistencies or incoherence in a person's sense of who they are.

Contrary to expectations, narrative coherence did not mediate the relationship between BPD traits and identity disturbances, but instead BPD traits mediated the

relationship between narrative coherence and identity disturbances. This finding is inconsistent with Fuchs' (2007) model, since Fuchs posited that BPD symptoms would lead to less coherent narratives, which would then lead to identity disturbances. It is however consistent with previous empirical findings (Levy et al., 2006) that overall improvement in BPD symptoms through treatment with transference focused psychotherapy (a psychodynamic therapy) is accompanied by increases in narrative coherence. This finding could be explained by the present findings, since presumably a psychodynamic treatment consisting in part of narrative recounting of life events, could improve narrative coherence, which could lead to improvement in BPD symptoms that are correlated with coherence. The cross-sectional nature of the present research of course limits the extent to which such causal interpretations can be supported by the findings.

Overall however, narrative coherence may be reflective of and necessary for more general mental health and well-being, rather than simply related to identity and as such may be related to a number of symptoms of distress, including traits symptomatic of BPD. Such a theory may also be supported by other research findings that have related narrative coherence to a variety of mental health symptoms more broadly, including depression (Levitt et al., 2000), and eating disorders (Von Wyl, 2000). Subsequently, an inability to tell a coherent life story may lead to various mental health symptoms, which may in turn interfere with a person's ability to develop a sense of who they are. For example, lack of narrative coherence may make it harder for people to regulate their mood and emotion (as presumably they would not be able to situate their current state in a broader life story – e.g. "I am depressed right now but I have been happy many times

before and will be happy again") This in turn may make it harder for them to develop a stable sense of self across situations since they would experience themselves as someone who shifts rapidly based on context. A bi-directional relationship between these variables is also possible, where for example an inability to regulate emotions and experience the self as stable might then further interfere with the ability to construct a coherent life narrative (as memories may be context and emotion dependent) which in turn may lead to less identity stability.

Finally, a number of third factors such as traumatic life experiences or generally more complex and tumultuous life events, rather than narrative coherence more broadly, may explain these findings and be correlated with identity disturbances. People with tumultuous or traumatic lives may have a more difficult time constructing a coherent life story and may also develop more BPD symptoms, which may then leave them unable to maintain a stable sense of who they are. Unfortunately, at present the cross-sectional design of the present study makes it impossible to draw definite causal or temporal conclusions, and thus to determine which of these interpretations best explains the findings at present.

The present findings were partially consistent with the second hypothesis. Dissociative experiences, but not affect intensity, interpersonal instability or thought suppressed, was found to be significantly correlated with narrative coherence. In addition, dissociative experiences mediated the relationship between BPD traits and narrative coherence, but the mediation was not statistically significant. The observed mediation may have been the result of a small effect size for the relationship between BPD traits

combined with loss of statistical power due to the addition of another variable, rather than reflective of the fact that dissociation mediates this relationship.

The findings were therefore only consistent with a part of Fuchs' (2007) model. His assertion that dissociation may be one particular BPD symptom that may be related to narrative coherence was supported by the significant relationship between these variables. None of the remaining three symptoms of BPD that he hypothesized to be related to narrative coherence were found to be significantly correlated with coherence in the present study. As well, despite the fact that dissociative experiences were related to coherence, they did not significantly mediate the relationship between coherence and BPD traits. Thus, it appears that other BPD traits or their correlates must play a significant role in this relationship and this relationship cannot be explained by dissociative experiences.

The lack of significant findings with respect to the other three proposed BPD symptoms (affect intensity, interpersonal instability, and thought suppression) may call into question the relationship between these factors and coherence, but may also be reflective of the fact that measures of these symptoms employed in this study were not developed specifically to measure these constructs as symptoms of BPD. Consequently, they may be broader or qualitatively different from the emotional instability and intensity, interpersonal instability, and experiential avoidance that are thought to be symptomatic of BPD. It is also possible, that the use of a non-clinical and relatively high-functioning undergraduate sample may have reduced variability on these measures such that relationships that may be found in the more general population or in clinical samples may have been attenuated.

Dissociative experiences, however, did fully mediate the relationship between coherence and identity disturbances. Hence, they may play a more substantial role in this relationship. This finding may further clarify the previously found mediational role of BPD traits in the relationship between coherence and identity disturbance. It is possible that the BPD trait of dissociative experiences, rather than BPD traits in general, fully account for the mediation of this relationship. Dissociative experiences may thus play a unique and important role with respect to the relationship between coherence and identity disturbances. As suggested in the discussion of the previous hypothesis, narrative coherence may be reflective of more traumatic experiences or more tumultuous life events, which are thought to be related to dissociation (e.g. McLewin & Muller, 2006). Dissociation may then interfere with the development of a stable sense of identity as it interferes with people's ability to process and remember life experiences in which they are dissociated.

Implications

Despite the explorative nature of this research and the limitations that come with such research, the findings from this study, if corroborated through further research and replication, could have a number of implications.

First of all, the findings of this study provide some guidance with respect to how identity disturbances may be operationally defined for the purpose of empirical research. Specifically, they provide support for the use of the IDS, as well as the IDQ, the only identity measure specifically developed to measure identity disturbances in BPD, as a self-report measure -- the internal consistency and predictive and concurrent validity of this measure were good in the present study.

Additionally, the present findings aid in clarifying the construct of identity disturbances in BPD, by establishing the relationships between coherence of life narratives, BPD traits, and identity disturbances. These findings lay the basis for further research that clarifies how and why narrative coherence is correlated with identity disturbances and BPD traits. Such research may allow for a better understanding of identity disturbances and may contribute to the accurate diagnosis of identity disturbances among those with BPD.

As well, these findings suggest that narrative coherence may be an important correlate of identity disturbances in BPD. Further research on narrative coherence and its temporal and causal relationship with BPD may have important implications for the diagnosis and treatment of identity disturbances among those with BPD. In particular, if lack of narrative coherence was found to precede the development of identity disturbances among those with BPD, or to maintain identity disturbances among those with BPD, interventions might be designed to target narrative coherence in order to address identity disturbances.

Also, the present study provided an examination of Fuchs' (2007) model and theory of identity disturbance in BPD, a theory of identity disturbance in BPD that previously has not been tested empirically. The lack of support for a relationship between coherence and affect intensity, interpersonal instability, and thought suppression in the present findings suggests that these BPD symptoms may not provide a way to explain narrative coherence and subsequently identity disturbances in BPD. Additionally, the present findings suggest that narrative coherence may not be the mechanism whereby BPD symptoms lead to identity instability. However, no such causal conclusions can be

drawn definitively. It must also be remembered that different findings might occur in a clinical sample of participants diagnosed with BPD.

Finally, this research provided empirical support for narrative theories of identity by demonstrating that narrative coherence is in fact associated with a more stable sense of identity. Few empirical examinations of these theories have been conducted to date. At the same time, narrative theories of identity provide a useful way to conceptualize identity, which is a rather elusive construct. As narrative theories of identity are the basis for theories across a number of social science and humanity disciplines, the implications of these findings may thus extend beyond psychology to support the continued use and application of narrative theories of identity in a wide variety of social scientific research.

Limitations and Future Directions

The findings of this study need to be interpreted in light of a number of methodological limitations. In terms of the internal validity of this study, due to online administration the environment in which participants completed this study could not be controlled. Although participants had to complete the study in a single sitting and were provided with instructions concerning the environment in which they should complete the study (quiet with minimal distractions when they have a 2-hour block of time to complete their responses), their adherence to these recommendations and environmental factors in the testing environment could not be controlled. At the same time, the additional privacy afforded by online participation may have made participants more comfortable responding honestly to personal questions and thus may also have improved the quality of responses.

In addition, it was difficult to interpret omitted and unreasonably short responses to the Life Story Interview. It is possible that such responses were meaningful; an

inability to produce any story or to produce a story that is longer than one sentence may be reflective of great difficulty producing coherent life narratives in response to prompts. At the same time, as participants completed this study for course credit, it was also very possible that such responses were reflective of a lack of engagement with the task. Participants with unusually short responses did not have greater identity disturbances or more BPD traits and as their responses were almost impossible to code, they were excluded from analysis. Providing participants with a means to indicate how much they enjoyed their participation or why they chose to provide short responses would have allowed the researcher to control for task engagement without confounding task engagement and narrative coherence. Overall however, only a very small proportion of participants provided insufficient responses and it is thus unlikely that the findings were substantially affected by the exclusion of these participants.

As this research design was relatively novel, it was also difficult to establish the validity of some of the methods used, particularly the coding scheme of narrative coherence. There is no established way to measure narrative coherence and no consensus on the exact nature of narrative coherence. Following a relatively extensive search of the literature, Katz's (1999) coherence coding scheme was chosen as it seemed to provide an appropriate way to capture the author's conception of narrative coherence and could be applied to the data of the present study. Yet, this coding scheme was not developed for this particular purpose and has not been used or validated much in psychological research in general or research on identity and Borderline Personality Disorder in particular. As such, research further validating this coding scheme is necessary in order to fully understand its psychometric properties.

As well, several measures were modified for this study. All measures were administered online, instead of in paper format, yet their psychometric properties were comparable. In addition, the Life Story Interview was administered by computer rather than as an interview, which increased standardization but changed the nature of data collection from an intersubjective conversational context where probing is possible, to a written context where coherence may in part depend on writing abilities, which may affect the validity of this measure. In light of the age of participants and the extent to which participants of this age tend to be relatively comfortable with the use of technology, and habituated to interacting socially using technology, the computer administration may not have altered the nature of this measure too substantially. In fact, such administration may have afforded additional privacy to participants. Participants generally responded relatively informally to questions, and typed responses that, for the most part, appeared to resemble interview transcripts rather than polished and formal pieces of writing. A number of participants also directly addressed the researcher as the reader in their responses, indicating that at least on an imagined level, participants felt that their responses would be read by another, and viewed this task as an interactive one. Thus, this study provides some evidence for the feasibility of online administration of interview measures such as the Life Story Interview.

In addition, the Identity Disturbance Questionnaire was changed into a self-report questionnaire from a clinician-rating questionnaire to allow for its use in this study. This change substantially altered the nature of this measure. Yet, given correlations between this measure and other identity measures and other variables in this study, as well as the

excellent internal consistency of this measure, it appears that the psychometric properties of this measure remained adequate when it was altered in this manner.

In terms of external validity, the sample used was an undergraduate student sample rather than a clinical sample and may not be representative of the overall clinical BPD population. As with all undergraduate samples, this sample was presumably higher functioning and also had higher education levels and socioeconomic status than the general population. Participants in this sample were also relatively young and thus, different results may be found with older participants, especially as it is thought that identity development occurs during both adolescence and early adulthood. This sample was also not representative of the general populations in terms of gender (there were many fewer males than females) and ethnic diversity (predominantly Asian and Caucasian), and as such, generalization to males and other cultures must be drawn with caution.

Also, BPD traits were measured using a self-report measure rather than a diagnostic interview. Despite the fact that the PAI-BOR has been found to have excellent positive predictive power, such that 95% of those who scored above a T-score of 65 on the PAI met the criteria for Borderline Personality in a Diagnostic Interview (Jacobo, Blais, Baity & Harley, 2007), a diagnosis still cannot be reliably established on the basis of a self-report measures and thus ultimately, no conclusions about those who meet the diagnostic criteria for BPD can be drawn from these findings. Nonetheless, this study clarifies traits that are thought to be symptomatic of BPD. Additionally, personality disorders can be conceptualized dimensionally and the wider range of traits represented in a normal population may allow for a more powerful test of the hypotheses.

Most importantly, the retrospective and cross-sectional design of this study limits the extent to which true tests of mediation can be performed. As mediational relationships imply causal and temporal relationships, and such relationships cannot be established conclusively without the use of longitudinal and experimental designs, the present study merely provides a preliminary test of a theory and a basis for future testing of the theories advanced that must be examined in future studies.

Finally, no claims about narrative coherence as a construct can be drawn from these findings. For the purpose of this study, narrative coherence is treated as a separate concept from identity disturbance. Relationships found between these concepts may be reflective of construct relationships, such that these concepts are separate but related constructs, or instead may be reflective of conceptual overlap or part-whole relationships. It is possible that narrative coherence simply provides a measure of identity disturbance. The present research provides a description of behavioural manifestations within a research model that makes a number of ontological and epistemological assumptions. Findings should be interpreted in light of these assumptions. At the same time, this research is empirical rather than conceptual in nature and as such, does not aim to address metaphysical claims about the nature of the constructs of identity and narrative as such conceptual inquiry exceeds the scope of the present project.

This research very broadly examines the connection between various factors and identity disturbances in a non-clinical sample. Future research should examine these connections in more detail using experimental designs, comparisons of clinical and non-clinical samples, and longitudinal designs. Research should also experimentally and descriptively examine the extent to which identity and narrative disturbances may be

influenced by current emotional states rather than being stable constructs. The use of a larger more representative clinical sample drawn from clinical settings to examine identity disturbances would also be welcome. Nevertheless, this research is an important first step in clarifying identity disturbances in BPD, an area that has been neglected to date, but one that appears to be important.

References

Adler, G., & Buie, D. (1979) Aloneness and borderline psychopathology: the possible

relevance of child development issues. *International Journal of Psychoanalysis,*

60, 83–96.

American Psychiatric Association. (2000). Borderline Personality Disorder. *Diagnostic*

and statistical manual of mental disorders (4th ed. text revision, pp. 198 – 199).

Washington, D.C.: Author.

Angus, L. (1996). An intensive analysis of metaphor themes in psychotherapy. In J. Mio

& A. Katz (Ed.), *Metaphor: Pragmatics and applications*. Hillsdale, NJ:

Lawrence Erlbaum Press, 73-84.

Angus, L., Levitt, H., & Hardtke, K. (1999). The narrative processes coding system:

Research applications and implications for psychotherapy practice. *The Journal of*

Clinical Psychology, *55*, 1255-1270

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in

social

psychological research: Conceptual, strategic, and statistical considerations.

Journal of

Personality and Social Psychology, 51(6), 1173-1182.

Becker, D. F., Grilo, C.M., Anez, L.M., Paris, M., & McGlashan, T.H. (2005).

Discriminant efficiency of antisocial and borderline personality disorder criteria

in Hispanic men with substance use disorders. *Comprehensive Psychiatry*, *46,*

140-146.

Berman, S. L., Montgomery, M. J. , & Kurtines, W. M. (2004). The development and
validation of a measure of identity distress. *Identity: An International Journal of
Theory and Research*, *4*, 1-8.

Blais, M. A., Hilsenroth, M. J., & Castlebury, F. D. (1997). Content validity of the DSM-
IV borderline and narcissistic personality disorder criteria sets. *Comprehensive
Psychiatry, 38*, 31–37.

Boals, A., Klein, K., & Banas, A. (2001). The Relationship of Expressive Writing,
Narrative Type, and Health. Poster session presented at the South Easter
Psychological Association Annual Convention, Atlanta, GA.

Bruner, J. (1986). *Actual minds, possible worlds*. Cambridge, MA: Harvard University
Press.

Buie, D., & Adler. G. (1982) Definitive treatment of the borderline personality.
International Journal of Psychoanalytic Psychotherapy, *9*, 51–87.

Carlson, E.B., & Putnam, F.W. (1993). An update on the Dissociative Experiences Scale.
Dissociation: Progress in the Dissociative Disorders, 6, 16–27.

Chapman, A.L., Leung, D.W., & Lynch, T.R. (2008). Impulsivity and emotion
dysregulation in borderline personality disorder. *Journal of Personality
Disorders, 22*, 148-164.

Cheavens, J. S., Rosenthal, M. Z., Daughters, S. B., Nowak, J. Kosson, D., Lynch, T. R.,
& Lejuez, C. W. (2005). An analogue investigation of the relationships among
perceived parental criticism, negative affect, and borderline personality disorder
features: the role of thought suppression. *Behaviour Research & Therapy, 43,*
257-268.

Clarkin, J. F., Hull, J. W., & Hurt, S. W. Factor structure of borderline personality disorder criteria. *Journal of Personality Disorders, 7*, 137–143.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155-159.

Fonagy, P., Moran, G.S., Steele, M., Steele, H., & Higgitt, A.C. (1991). The capacity for understanding mental states: the reflective self in parent and child and its significance for security of attachment. *Infant Mental Health Journal, 13,* 200–216.

Fossati, A., Maffei, C., Bagnato, M., Donati, D., Nambia, C., & Novella, L. (1999). Latent structure analysis of DSM-IV borderline personality disorder criteria. *Comprehensive Psychiatry, 40*, 72–79.

Fuchs, T. (2007). Fragmented Selves: Temporality and Identity in Borderline Personality Disorder. *Psychopathology, 40,* 379-387.

Goncalves, O., Korman, Y. & Angus, L. E. (2000). Constructing psychopathology from a Cognitive Narrative perspective. In R. A. Neimeyer & J. D. Raskin (Eds.) *Constructions of Disorder*. American Psychological Association Press, 265-284.

Grilo, C. M., Sanislow, C. A., Skodol, A.E., Gunderson, J.G., Stout, R.L. Bender, D.S., Yen, S., Shea, M.T., Morey, L.C., Zanarini, M.C., & McGlashan, T.H. (2007). Longitudinal Diagnostic Efficiency of DSM-IV Criteria for Borderline Personality Disorder: A 2-Year Prospective Study. *The Canadian Journal of Psychiatry, 52,* 357-362.

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villasenor, V. S. (1998). Inventory of interpersonal problems: Psychometric properties and clinical applications. *Journal of Consulting and Clinical Psychology, 56,* 885-892.

Howard, G. S. (1989). *A tale of two stories: Excursions into a narrative approach to psychology*. Notre Dame, IN: Academic Publications.

Howard, G. S. (1991). Culture tales: A narrative approach to thinking, cross-cultural psychology and psychotherapy. *American Psychologist, 46*(3), 187-197.

Hull, J.W., Clarkin, J.F., & Kakuma, T. (1993). Treatment response of borderline inpatients. A growth curve analysis. *Journal of Nervous and Mental Disease, 181,* 503-508.

Jacobo, M. C., Blais, M. A., Baity, M. R., & Harley, R. (2007). Concurrent Validity of the Personality Assessment Inventory Borderline Scales in Patients Seeking Dialectical Behavior Therapy, *Journal of Personality Assessment, 88,* 74 – 80.

Jorgensen, C. R. (2006). Disturbed Sense of Identity in Borderline Personality Disorder. *Journal of Personality Disorders, 20*, 618-644.

Jorgensen, C. R. (2009). Identity Style in patients with Borderline Personality Disorder and Normal Controls. *Journal of Personality Disorders, 23*, 101-112.

Katz, S. (1999). <u>Training manual for coherence scoring</u>. North Carolina State University Department of English, Raleigh, NC.

Kernberg, O. (1975). *Borderline Conditions and Pathological Narcissism*. New York: Jason Aronson.

Kernberg, O. (1984). *Severe Personality Disorders*. New Haven, Conn: Yale University Press.

Koenigsberg, H.W., Harvey, P.D., Mitropoulou, V., New, A.S., Goodman, M.,

    Silverman, J., Serby, M., Schopick, F., & Siever, L.J. (2001). Are the

    Interpersonal and Identity Disturbances in the Borderline Personality Disorder

    Criteria Linked to the Traits of Affective Instability and Impulsivity? *Journal of*

    Personality Disorders, 15, 358-370.

Larsen, R. J. (1984). Theory and measurement of affect intensity as an individual

    difference

    characteristic. *Dissertation Abstracts International, 85*, 2297B. (University

    Microfilms No. 84-22112).

Lejuez, C. W., Daughters, S. B., Nowak, J. A., Lynch, T., Rosenthal, M. Z., & Kosson,

    D. (2003). Examining the inventory of interpersonal problems as a tool for

    conducting analogue studies of mechanisms underlying borderline personality

    disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 34,* 313-324.

Levitt, H., Korman, Y., & Angus, L. (2000). A metaphor analysis in the treatment

    of depression: Metaphor as a marker of change. *Counseling Psychology*

    Quarterly, 13, 23-36.

Levy, K.N., Meehan, K.B., Kelly, K.M., Reynoso, J.S., Weber, M., Clarkin, J.F., &

    Kernberg, O.F. (2006). Change in Attachment Patterns and Reflective Function in

    a Randomized Control Trial of Transference-Focused Psychotherapy for

    Borderline Personality Disorder. *Journal of Consulting and Clinical Psychology,*

    74, 1027-1040.

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality*

    disorder. New York: Guilford Press.

MacIntyre, A. (1984). *After Virtue: A Study in Moral Theory*. Notre Dame: University of

    Notre Dame Press.

McAdams, D. P. (1995). *The life story interview: revised.* Northwestern University,

    Evanston, Illinois.

McLewin, L. A., & Muller, R. T. (2006). Childhood trauma, imaginary companions, and

    the development of pathological dissociation. *Aggression and Violent Behavior,*

    11, 531-545.

Modestin, J., Oberson, B., & Erni, T. (1998). Identity disturbance in personality

    disorders. *Comprehensive Psychiatry, 39*, 352–357.

Morey, L. C. (1991). *Personality Assessment Inventory: Professional manual.* Odessa,

    FL: Psychological Assessment Resources.

Narrative. (1989). In *Oxford English Dictionary* (2nd ed.). Retrieved April 9, 2008, from

    Oxford English Dictionary Online database.

Pennebaker, J. W. & Francis, M. (1999). Linguistic Inquiry and Word Count: LIWC.

    Mahwah, NJ: Erlbaum

Pfohl, B., Zimmerman, M., & Strengl, D. (1986). DSM-III personality disorders:

    Diagnostic overlap and internal consistency of individual DSM-III criteria.

    Comprehensive Psychiatry, 29, 7–135.

Ricoeur, P. (1990). *Oneself as Another* (K. Blamey, Trans.). Chicago: The University of

    Chicago Press.

Serafini, T. E., Maitland, S. B, & Adams, G. R. (2006, March). *The Functions of Identity*

    Scale: Revisions, validation and model testing. Poster presented at the Biennial

    Meeting of the Society for Research on Adolescence, San Francisco, California.

Taylor, C. (1989). *Sources of the Self: The Making of the Modern Identity*. Cambridge,

    Massachusetts: Harvard University Press.

Taylor, J., & Reeves, M. (2007). Structure of borderline personality disorder symptoms in

    a nonclinical sample. *Journal of Clinical Psychology, 63*, 805-816.

Becker, D.F., McGlashan, T.H., & Grilo, C.M. (2006). Exploratory factor analysis of

    borderline personality disorder criteria in hospitalized adolescents.

    Comprehensive Psychiatry, 47, 99-105.

Trull, T. J. (1995). Borderline personality disorder features in nonclinical young adults:

    Identification and validation. *Psychological Assessment, 7*, 33-41.

Trull, T.J. (2001). Structural relations between borderline personality disorder features

    and putative etiological correlates. *Journal of Abnormal Psychology, 110*, 471-

    481.

von Wyl, A. (2000). Magersüchtige und bulimische Patientinnen erzählen: eine narrative

    Studie der Psychodynamik (Doctoral dissertation, Universitaet Zuerich, 1998).

    Dissertation Abstracts.

Wegner, D. M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of*

    Personality, 62, 615–640.

Widiger, T. A., & Frances, A. J. (1987). Interviews and inventories for the measurement

    of personality disorders. *Clinical Psychology Review, 7,* 49-75.

Widiger, T. A., Frances, A., Warner, L., & Bluhm, C. (1986). Diagnostic criteria for the

    borderline and schizotypal personality disorders. *Journal of Abnormal*

    Psychology, 95, 43–51.

Wilkinson-Ryan, T., & Westen, D. (2000). Identity disturbance in borderline personality

disorder: an empirical investigation. *American Journal of Psychiatry, 157*, 528-

541.

Yen, S., Shea, M. T., Sanislow, C.A., Grilo, C. M., Skodol, A. E., Gunderson, J. G.,

McGlashan, T. H., Zanarini, M. C., & Morey, L. C. (2004) Borderline Personality

Disorder Criteria Associated With Prospectively Observed Suicidal Behavior.

American Journal of Psychiatry, 161, 1296-1298.

Figure Captions

Figure 1. Fuchs' (2007) narrative model of identity disturbances in Borderline Personality Disorder

Figure 2. The full mediation of the relationship between coherence and Identity Disturbances by BPD traits measured by the Borderline scale of the PAI.

Figure 3. The absence of significant mediation of the relationship between coherence and Identity Disturbances by the Identity Problem subscale of the PAI.

Figure 4. The full mediation of the relationship between coherence and Identity Disturbances by BPD traits other than identity problems measured by the Borderline scale of the PAI.

Figure 5. The absence of significant mediation of the relationship between coherence and BPD traits by Dissociative Experiences, Affective Intensity, Interpersonal Instability and Thought Supression.

Figure 6. The full mediation of the relationship between coherence and Identity Disturbance by Dissociative Experiences.