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The Dynamics of Self-Esteem in Cognitive Therapy for Avoidant and Obsessive-Compulsive Personality Disorders: An Adaptive Role of Self-Esteem Variability?

Jorden A. Cummings,
University of Saskatchewan

Adele M. Hayes,
University of Delaware

LeeAnn Cardaciotto, and
LaSalle University

Cory F. Newman
Center for Cognitive Therapy, University of Pennsylvania

Abstract

Self-esteem variability is often associated with poor functioning. However, in disorders with entrenched negative views of self and in a context designed to challenge those views, variable self-esteem might represent a marker of change. We examined self-esteem variability in a sample of 27 patients with Avoidant and Obsessive-Compulsive Personality Disorders who received Cognitive Therapy (CT). A therapy coding system was used to rate patients' positive and negative views of self expressed in the first ten sessions of a 52-week treatment. Ratings of negative (reverse scored) and positive view of self were summed to create a composite score for each session. Self-esteem variability was calculated as the standard deviation of self-esteem scores across sessions. More self-esteem variability predicted more improvement in personality disorder and depression symptoms at the end of treatment, beyond baseline and average self-esteem. Early variability in self-esteem, in this population and context, appeared to be a marker of therapeutic change.

Keywords

self-esteem; cognitive therapy; personality disorders

Much emphasis has been placed on the construct of global self-esteem as a foundation of mental health. High self-esteem refers to a generally favorable global evaluation of the self, and low self-esteem refers to an unfavorable definition of the self, whether accurate or not (Baumeister, Campbell, Krueger, & Vohs, 2003; Rosenberg, 1965). In a review of decades of research on self-esteem, Baumeister et al. (2003) conclude that although high global self-esteem consistently has been associated with happiness and motivation and low self-esteem with poor functioning, most of the associations between self-esteem levels and social outcomes are correlational, have small effect sizes, and are confounded with other variables.

Correspondence regarding this article should be addressed to Adele M. Hayes, Department of Psychology, University of Delaware, Newark, Delaware 19716. ahayes@udel.edu.
Jorden A. Cummings, Department of Psychology, University of Saskatchewan; Adele M. Hayes, Department of Psychology, University of Delaware; LeeAnn Cardaciotto, Department of Psychology, LaSalle University; Cory F. Newman, Center for Cognitive Therapy, University of Pennsylvania.

They also note that high self-esteem can be maladaptive in some cases, as with narcissism or having an overly inflated and unrealistic sense of self. Swann, Chang-Schneider, and McClarty (2007) challenge some of these conclusions, but they also highlight problems with the study of global and static levels self-esteem.

Researchers have begun to focus on self-esteem *variability* over time rather than on high versus low levels of self-esteem at one time point. Self-esteem variability refers to the magnitude of short-term fluctuations of self-esteem (Rosenberg, 1986). Variability typically has been calculated as the standard deviation of an individual's total scores across multiple assessments, with larger standard deviations reflecting more labile self-esteem.¹ Self-esteem variability measured in this way has been shown to be distinct from both global self-esteem level (Kernis & Waschull, 1995; Roberts & Gotlib, 1997) and from mood variability (Oosterwegel, Field, Hart, & Anderson, 2001; Roberts & Gotlib, 1997). Static measures of self-esteem levels often yield mixed findings or leave a significant proportion of outcome variance unaccounted for, whereas multiple measures of self-esteem over time can capture contextual influences and reactivity to perceived threats to the sense of self (Roberts & Monroe, 1994; Kernis, 2005).

Generally, research on self-esteem variability portrays stability as positive and associated with mental health. For example, individuals with high self-esteem that is stable over time have greater self-concept clarity, which is the extent to which one's self-concept is clearly defined, consistent, and stable. Children with stable self-esteem show a preference for internal motivation at school (Waschull & Kernis, 1996). In contrast, variability in self-esteem is usually characterized as a significant predictor of negative functioning. However, we examine the possibility that when individuals are locked in pathological patterns of functioning with entrenched negative views of self, as is the case with personality disorders, introducing variability rather than enhancing stability might be an important goal of treatment.

When Self-Esteem Variability is not Adaptive

Much of the research on self-esteem variability has focused on depressive symptoms. For instance, college students with current or past depression report higher levels of self-esteem variability, but they are indistinguishable from never-depressed controls on *level* of self-esteem (Butler, Hokanson, & Flynn, 1994). Those with elevated symptoms of depression and more variable self-esteem also show more negative reactions to failure (Pyszczynski & Greenberg, 1985), defensiveness in response to negative feedback (Kernis, Cornell, Sun, Berry, & Harlow, 1993), and a greater impact on views of self in the face of both negative and positive daily events (Greenier et al., 1999; Roberts & Kassel, 1997). Self-esteem variability also predicts subsequent depressive symptoms (Butler et al., 1994), especially in interaction with stressful life events and a more severe history of past depression (Roberts & Gotlib, 1997; Roberts & Kassel, 1997).

Self-esteem variability has also been associated with more anger and hostility (Kernis, 2005), suicidality (de Man & Becerril Gutiérrez, 2002), more self-consciousness, social anxiety, and social avoidance (Oosterwegel, et al., 2001), low intrinsic motivation in children (Waschull & Kernis, 1996), and poor interpersonal functioning (Kernis et al., 1993). In addition, veterans with Post-Traumatic Stress Disorder (PTSD) report more fluctuations in self-esteem (Kashdan, Uswatte, Steger, & Julian, 2006) than those without PTSD. Regardless of PTSD symptoms, self-esteem variability in that study was associated

¹We use the term variability, because larger standard deviations indicate more variability. This index has also been labeled self-esteem lability or stability by others.

with lower well-being for all participants. Instability of self-esteem also characterizes patients with bipolar disorder, even when their symptoms are in remission (Knowles, Tal, Jones, Highfield, Morriss, & Bentall, 2007). Together, these studies suggest that self-esteem variability is a useful construct that is associated with a number of negative mental health outcomes.

When Self-Esteem Variability Might be Adaptive

An assumption of the research to date is that self-esteem variability is maladaptive, but we argue that there are some contexts in which a degree of fluctuation in self-esteem might be adaptive. For example, a person's view of self should be somewhat responsive to environmental events and feedback from others, as one who is impervious to such feedback is likely to experience interpersonal and learning difficulties (Baumeister et al., 2003). In addition, reactivity to negative events or internal states can provide important signals that one's present state is undesirable and that goals are not being met, and thus these fluctuations can motivate behavior change (Carver & Scheier, 1998).

Self-esteem is a common target in therapies for clinical disorders, where the goal is to "shake up" entrenched negative views of self and patterns of functioning that maintain psychopathology. Here, some variability is necessary for change to occur, as system flexibility and destabilization can allow for new learning (Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007; Hayes & Strauss, 1998). Consistent with this perspective, Roberts, Shapiro, and Gamble (1999) reported that in the context of a psychoeducational intervention for depression symptoms, those with more stable self-esteem at pretreatment showed less improvement in depression symptoms at the end of treatment, even when controlling for baseline symptom severity. This was especially the case for those with lower self-esteem levels at pretreatment.

Another issue to consider in research on self-esteem lability is the nature of the problem being studied. Although some clinical disorders are characterized by self-esteem variability, others are marked by a notable lack of variability. Most personality disorders, for instance, are characterized by maladaptive patterns that are pervasive, inflexible, and relatively *stable* over time (American Psychiatric Association, 1994). This form of psychopathology is generally defined by entrenched maladaptive beliefs about the self and the world that are associated with biased processing of information and maintenance of the pathology (Beck, Freeman, Davis et al., 1990; Young, 1994). In addition, personality disorders are highly comorbid with depression, another disorder characterized by a stable, negative view of self (Roberts et al., 1999). Thus, a common goal of cognitively-based therapies for personality disorders is to perturb and loosen these entrenched patterns to facilitate change. Only a few studies have examined self-esteem variability in the context of personality disorder symptoms, but these samples included college students with narcissistic or borderline personality features (Rhodewalt, Madrian, & Cheney, 1998; Zeigler-Hill & Abraham, 2006) rather than clinical samples in the context of therapy.

Current Study

This study examines another possible side of variability – variability that marks an increase in flexibility that can allow for change. This sample includes those with particularly entrenched and problematic patterns and views of self, patients with Avoidant (AVPD) and Obsessive-Compulsive (OCPD) Personality Disorders. There is a paucity of research on self-esteem and its variability in AVPD and OCPD, yet disturbances in thinking about the self and others are considered fundamental to personality psychopathology in recent efforts to improve diagnostic criteria for personality disorders [American Psychiatric Association

(APA) DSM-V work group, 2011]. Stability and accuracy of self-appraisal and self-esteem are key components of this proposed self functioning dimension of personality disorders.

Patients with AVPD and OCPD experience dysfunction in the self functioning domain. Those with AVPD frequently experience feelings of inadequacy, social ineptness, inferiority (APA, 1994, 2011) and overall low self-esteem, even when compared to patients with other personality disorders (Lynum, Wilberg, & Karterud, 2008). Patients with OCPD are preoccupied with the need for order, precision, perfection, and control. They experience significant insecurity, anxiety, guilt, or shame over real or perceived deficiencies or failures, while also acting in controlling, competitive and critical ways toward others. (APA, 1994, 2011; Weertman, Arntz, de Jong, & Rinck, 2008). In addition, almost 75% of our sample met criteria for comorbid Major Depressive Disorder, another disorder characterized by entrenched negative views of the self (Beck & Dozois, 2011). Thus, view of self is a critical aspect of personality pathology, and an early task of therapy might be to destabilize entrenched maladaptive views of self. There is no research, to our knowledge, examining self-esteem variability in this population.

Further, the present study examines variability in self-esteem in a new context—that of cognitive therapy for personality disorders (CT-PD; Beck et al., 1990). This therapy is designed to activate, challenge, and loosen enduring and maladaptive patterns of cognitive, affective, and behavioral functioning. Therapy represents an active, purposeful perturbation of the self-system, and early variability in self-esteem might be a marker of potential for change rather than an indicator of the fragility of one's sense of worth.

We focus on the early phase of therapy. This allows for identification of early prognostic variables before most of the symptom change has already occurred. Furthermore, early destabilization and variability in cognitive behavioral therapy (CBT) has been identified as a predictor of positive treatment outcomes across multiple populations. For example, Ilardi and Craighead (1994) identified an early rapid response pattern, where depressed patients experienced a substantial decrease in symptoms by session four of CBT. This early rapid response also has been shown to predict better treatment outcomes in panic disorder (Penava, Otto, Maki, & Pollack, 1998) and bulimia (Grilo, Masheb, & Wilson, 2006). Another pattern of early change, the sudden gain (a substantial between-session improvement in depressive symptoms), has been shown to occur most often by session 10 of cognitive therapy and to predict better posttreatment outcomes (Tang & DeRubeis, 1999). This body of literature suggests that a focus on early change and variability in therapy can be fruitful and can reveal important predictors of treatment outcome. We examined variability in self-esteem and depressive symptoms in the first 10 sessions of CT-PD (Beck et al, 1990).

Identifying early predictors of treatment prognosis in personality disorders can have important clinical implications. For example, patients with comorbid personality disorders and Axis I disorders, such as the sample in this study, are prone to early drop out (Leichsenring & Leibling, 2003) and a longer time to recovery (Grilo et al., 2005). Understanding early markers of prognosis can be informative for therapists and patients by indicating whether therapy is progressing appropriately or might require a change of course. In addition, early indicators of change and progress can be motivating for therapist and patient, both of whom can experience frustration at the slow progress and longer term nature of treatment for personality disorders relative to Axis I disorders (Beck et al., 1990).

Another advance in this study is that we used an observational coding system to measure the extent of positive and negative view of self expressed by patients in therapy sessions rather self-report questionnaires of global self-esteem, which can be biased. Research suggests that

participants cannot reliably report how variable their own self-evaluations are (Kernis et al., 1989, Kernis, Granneman, & Barclay, 1992), and objective evidence often disconfirms individuals' ratings of their own views of self (Baumeister et al., 2003). Baumeister and colleagues (2003) have argued for the use of objective measures whenever possible, and Knowles et al. (2007) further encourage the assessment of self-esteem over time and across situations to increase the ecological validity of this line of research.

We examined whether early self-esteem variability was a significant predictor of change in personality symptoms and depression in a sample of patients with AVPD or OCPD who received cognitive therapy for personality disorders (Beck et al., 1990). This study is both theoretically and practically relevant, as it can contribute to the literature on self-esteem variability, as well as the process of change in personality disorders. Although the existing literature suggests that more variability should be associated with worse outcomes, we hypothesized that in this population and context, some flexibility and self-esteem variability might facilitate positive change. Early self-esteem variability was expected to be a stronger predictor of outcome than average levels of self-esteem.

Method

Data Source

Outcome data for this study were drawn from an archived open trial of cognitive therapy (CT-PD) for AVPD and OCPD. The details of the trial have been described in an earlier publication (Strauss, Hayes, Johnson, Newman, Brown, Barber et al., 2006); we present below the outcome variables relevant to the present study. Audiotaped therapy sessions from the trial were coded for a patient focus on view of self.

Participants

Potential participants were administered the Structured Clinical Interview for the DSM-III-R (SCID; Spitzer, Williams, Gibbon, & First, 1990a) and the Structured Clinical Interview for the DSM-III-R Personality Disorders (SCID-II; Spitzer, Williams, Gibbon, & First, 1990b) as part of an extensive intake interview. The fourth author confirmed that all patients also met criteria for the updated SCID-II for DSM-IV-TR (First, Gibbon, Spitzer, Williams, & Benjamin, 1997). Exclusion criteria were active suicidality, substance dependence within the past year, psychosis, bipolar disorder, schizotypal or borderline personality disorder, or an organic dysfunction. Thirty patients in that trial met diagnostic criteria for a primary diagnosis of AVPD ($n = 25$) or Obsessive-Compulsive Personality Disorder ($n = 15$) and completed at least 10 therapy sessions. Patients were allowed up to 52 sessions that occurred across 12 to 16 months and. On average, participants attended 29.74 sessions ($SD = 18.85$).

Twenty-seven of those 30 patients met the inclusion criteria for the present study: Pre- and posttreatment symptom assessments and at least three audible session tapes between sessions one and ten. The mean age of participants was 34 years-old ($SD = 9.30$). The majority were female (15 female, 12 male), single or divorced (63% single/divorced, 33% married), and 8% were ethnic minorities. All but one participant had some level of college education. All participants had a primary diagnosis of either AVPD (72%) or OCPD (28%). In addition, 75% met criteria for comorbid depression.

Therapists and Treatment Outcome

Fourteen therapists (two predoctoral, 12 doctoral-level), who were previously trained in cognitive therapy at the Center for Cognitive Therapy at the University of Pennsylvania, received additional training in CT-PD (Beck et al., 1990). CT-PD is similar to CT for Axis I disorders in its focus on dysfunctional schemata, cognitive-affective-behavioral connections,

and teaching skills to modify schematic vulnerabilities. However, CT-PD places more emphasis on examining the historical roots of problems, interpersonal patterns, the therapeutic alliance, and eliciting in-session affect. Therapists received one hour of individual supervision for every two hours of therapy and attended weekly group supervision meetings and monthly case conferences.

Outcome analyses of the clinical trial were conducted for all patients who completed any personality symptom assessments after initial intake. As reported in Strauss et al. (2006), CT-PD was associated with significant improvement in personality and depression symptoms. Only 6% met diagnostic criteria for AVPD or OCPD at posttreatment, and although 75% met criteria for a comorbid mood disorders at intake, only 37% met criteria at posttreatment.

Symptom Measures

PD symptoms were assessed with the SCID-II (Spitzer et al., 1990b). The diagnostic interviews were conducted by post-doctoral psychologists, who were blind to participants' diagnosis and therapeutic progress. Unweighted kappa coefficients for interrater agreement for the AVPD and OCPD diagnoses were .94 and .69, respectively, indicating good to excellent agreement (Landis & Koch, 1977). Item ratings on the SCID-II were totaled to yield dimensional AVPD and OCPD symptom scores for each patient. Because the SCID-II AVPD and OCPD scales have a different number of items, we calculated AVPD and OCPD z scores for each participant in order to standardize these scales. The standardized score of the personality disorder (AVPD or OCPD) that was the primary diagnosis for a given individual was used as the measure of personality disorder at pretreatment and posttreatment, as was done in previous publications with this dataset (Barber, Morse, Krakauer, Chittams, & Crits-Christoph, 1997; Strauss et al., 2006). The SCID-II was administered at intake, session 17, session 34, and at termination.

Depression symptoms were measured with the *Beck Depression Inventory* (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), a 21-item self-report measure used to assess these symptoms over a one week period. Items are rated on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*severely*), with possible total scores ranging from 0 to 63. The BDI has been shown to have sufficient internal consistency and good construct validity (Beck, Steer, & Garbin, 1988). Participants completed the BDI at the beginning of every session. We calculated a BDI variability score by calculating the standard deviation of BDI scores from sessions one to ten that matched the sessions used to generate self-esteem variability scores. In addition, BDI scores at intake and at the end of treatment were used for pre and posttreatment depression scores.

Observational Coding of Self-Esteem

In the present study, we used the CHANGE (Hayes, Feldman, & Goldfried, 2006), an observational coding system designed to describe the frequency and extent of several constructs hypothesized to be important in the process of change in cognitive-behavioral psychotherapies. Audiotaped therapy sessions were coded for positive view of self (feeling worthwhile, desirable, competent, and/or acceptable) and negative view of self (feeling worthless, undesirable, incompetent, and/or unacceptable). These variables were rated on a 4-point Likert scale (0 = *not present or very low*; 1=*low*; 2=*medium*; 3=*high*) for the extent to which patients expressed a positive or negative view of self in a given therapy session. Categories are not mutually exclusive and can co-occur. For example, one can talk about negative view of self and also acknowledge positive aspects of the self in the same session. Four coders (three doctoral students in clinical psychology and one advanced undergraduate student) were trained to criterion [an intraclass correlation (ICC) of .80; Shrout and Fleiss,

1979] before coding sessions for this study and were blind to participants' diagnostic and treatment status. Final estimates of inter-rater agreement (intraclass correlations) were in the good to excellent range (Positive View of Self ICC= .78; Negative View of Self ICC=.80).

Positive View of Self is the extent to which the patient describes feeling worthwhile, desirable, competent, deserving of respect, and otherwise acceptable. An example of a high level of positive self (i.e., rating of 3) is:

I am starting to see that even though my mother told me that I would never amount to anything, I have really come a long way. I am not addicted to drugs like the rest of my family, I have a good job, and I am a good mother.

Positive self is not coded if there is simply an absence of negative self. That is, there must be evidence of positive descriptions of self that are at least somewhat elaborated.

Negative View of Self is the extent to which the patient describes feeling incompetent, worthless, undesirable, inadequate, or otherwise flawed. An example of a high level of negative self (i.e., rating of 3) is:

I sat around all day thinking about all the ways I have failed or let people down. I was supposed to be the family success, but I have failed at everything I have touched. I just can't face people.

Most researchers have used the self-report Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) to assess self-esteem variability, and they create a composite self-esteem score by reverse scoring the negative self-esteem items and then summing the positive and negative self-esteem items. Higher scores indicate higher levels of self-esteem. To be consistent with this, we reverse scored the negative view of self rating and added the positive and negative views of self ratings to create a composite view of self score for each session. This study is the first application of the CHANGE to study of self-esteem. This composite self-esteem score that ranged from one to six was used to calculate average level of self-esteem and the variability of self-esteem (standard deviation) across all ten sessions. Individual scatterplots of self-esteem scores across sessions one to ten revealed that most participants showed self-esteem variability during this time frame. Only two patients showed a general linear increase in self-esteem scores.

Procedure

Following the diagnostic intake, informed consent was obtained from patients who agreed to receive treatment. All sessions were audiotaped, and the BDI was administered before each session. Each session was coded by two of four independent raters. Ratings were averaged to create a final score for Positive View of Self and Negative View of Self for each session. Every other session was coded from the available and audible sessions for each patient in the first phase of treatment (sessions 1-10, up to 5 session tapes). Between three to five session tapes ($M = 4.07$, $SD = .68$) were coded for each participant during this time period.

Results

Preliminary Analyses

Neither AVPD nor OCPD diagnostic status predicted posttreatment outcome on the SCID-II, after controlling for pretreatment scores. In addition, there were no significant differences between AVPD and OCPD patients on baseline self-esteem, average self-esteem across sessions one to ten, or self-esteem variability. Thus, the AVPD and OCPD groups were aggregated to increase power.

Baseline, average, and variability of self-esteem were calculated. The first available self-esteem rating in sessions one or two was used for baseline level. The average level of self-esteem was the mean level over the first 10 sessions. Consistent with previous research (e.g., Kernis et al., 1989; Roberts, Kassel, & Gotlib, 1995), self-esteem variability for each participant was calculated as the standard deviation of his or her self-esteem composite scores across the sampled sessions. Higher baseline and average scores indicate higher levels of self-esteem, and higher standard deviations indicate more self-esteem variability.

Descriptive and correlational statistics for self-esteem variability, baseline, and average levels and pre- and posttreatment outcome variables are presented in Table 1. As shown in Table 1, the average level of self-esteem across the first 10 sessions was 2.90 ($SD = .73$), and the average self-esteem variability was .80 ($SD = .49$). Self-esteem variability was not significantly correlated with baseline self-esteem, average level of self-esteem, or BDI variability, which suggests that it is not redundant with these constructs. Because baseline and average level of self-esteem are conceptually related and were highly correlated in this sample ($r = .59$), baseline self-esteem level was not included as a predictor of treatment outcome.

Predictors of Treatment Outcome

We conducted hierarchical multiple regressions to examine self-esteem variability as a predictor of posttreatment outcomes. Average self-esteem was also entered into the equation to examine whether self-esteem variability predicted outcome beyond this. Personality symptoms and depression were examined as outcomes in separate models. In both models, pretreatment symptom levels for that outcome were entered in Step 1. Average level of self-esteem and self-esteem variability were entered simultaneously in Step 2. As seen in Table 2, greater self-esteem variability early in therapy predicted more improvement in both personality symptoms and depression at posttreatment, whereas average levels of self-esteem did not.² To explore whether variability in depression and distress on the BDI and average BDI levels might be important covariates, we examined BDI variability and average scores across sessions one through 10 as predictors of treatment outcome, controlling for relevant symptoms at intake. Unlike self-esteem variability, BDI variability did not significantly predict change in personality symptoms nor did average BDI levels (see Table 3). These findings suggest that self-esteem variability contributes uniquely to improvement in functioning at the end of treatment, beyond its average across the ten sessions. In addition, these associations do not seem to be due to variability in depression scores (BDI) over this same period.

Discussion

The goal of this study was to examine the role of self-esteem variability in a sample characterized by longstanding inflexibility and in a therapeutic context designed to perturb entrenched patterns and foster change. We used an observational method to measure self-esteem and its variability over a ten-week period of treatment, and then examined this early variability as a predictor of treatment outcome (personality disorder and depressive symptoms) measured up to one year later. Although the current literature suggests that greater self-esteem variability is associated with worse mental health outcomes, we explored the possibility that variability in a personality-disordered sample could instead be a predictor of better posttreatment functioning.

²In addition, we examined self-esteem variability as a predictor of personality symptoms and depression over and above baseline levels of self-esteem. In these models, self-esteem variability remained a significant predictor of both personality and depressive symptoms.

It is interesting that average levels of self-esteem did not predict posttreatment outcomes. In contrast, self-esteem variability predicted improvement in both personality and depression symptoms after a course of CT-PD, even after controlling for average levels of self-esteem. Further, variability in BDI scores did not significantly predict treatment outcomes. These findings extend research associating self-esteem variability only with negative outcomes (e.g., Butler et al., 1994; Roberts & Kassel, 1997; Roberts & Monroe, 1994) and suggest that variability in the context of therapy might be helpful, as was also reported by Roberts et al. (1999). A lack of fluctuation might reflect entrenched maladaptive patterns, whereas increases in variability might represent readiness or flexibility for change (Hayes et al. 2007; Hayes & Strauss, 1998).

Our study examines self-esteem variability in a new context and time frame: Cognitive therapy for personality disorders that was conducted for up to 52 weeks. Previous research conducted over a one to two week period of everyday life (e.g., Greenier et al., 1999; Roberts & Monroe, 1994) suggests that self-esteem variability in reaction to negative events is associated with negative outcomes. In contrast, the variability in our study reflects, at least in part, reactivity to a therapy that is designed to facilitate change. Our findings suggest that it might be important to consider the populations included in studies of self-esteem variability, the context in which they are studied, and the source of the disturbance. Such information might be relevant to whether variability is associated with negative or positive outcomes, as Roberts et al. (1999) also propose.

Our findings have several theoretical and practical implications. These results contribute to research on the importance of variability in the process of change during treatment for personality disorders. Strauss et al. (2006) reported that in this same sample, variability in the therapeutic alliance, if handled well, can be associated with significant improvement in cognitive therapy. Similarly, the current study suggests that variability in self-esteem is associated with change in this difficult-to-treat population. Variability in self-esteem might not always be undesirable or something to be avoided in the context of treatment, but rather some variation might be a necessary part of therapeutic change. It is possible that the early variability that we captured marks an opening of the patterns of dysfunctional self functioning that the DSM-V work group (APA, 2011) propose contribute to personality disorders. This disturbance can then facilitate later change.

This study also addresses several weaknesses in previous research on self-esteem variability. Specifically, our use of a clinical sample, the context of a therapy designed to perturb and improve self-esteem, observational codings of verbalizations of positive and negative view of self, and the assessment of self-esteem over a longer period of time, all represent improvements upon previous methods.

However, there are some limitations that warrant discussion. First, although this sample is typical of those reported in clinical trials of long-term treatments for personality disorders, the sample size is small, and the need for replication is important. Second, some personality disorders, such as borderline personality disorder and narcissistic personality disorder, are characterized by self-esteem lability (Rhodewalt, et al., 1998; Zeigler-Hill & Abraham, 2006), and therapy often focuses on stabilizing the concept of self rather than destabilizing it. Thus, our results might not generalize, or might even be contrary, to treatment for other personality disorders. These results speak to the importance of treating personality disorders based upon their specific symptom profiles and recognizing clinical differences between clusters. In addition, a self-report measure of self-esteem was not included in this clinical trial, so it is not clear that the Positive View of Self and Negative View of Self items of the CHANGE measure (Hayes et al., 2006) are measuring the same construct as the RSES (Rosenberg, 1965). Furthermore, this is the first application of the CHANGE to the study of

self-esteem, and future research is needed to support its validity as used in this manner. Additional measures of self-esteem would have strengthened this study, but were unfortunately not available in this archival dataset. However, our finding that more self-esteem variability predicted better treatment outcomes converges with Roberts et al.'s (1999) finding that more variability using yet another measure, the Stability of Self Scale (Rosenberg, 1979), predicted improvement in depressive symptoms.

We also sampled from the first 10 sessions of this 52-session treatment, and thus we cannot address the role of self-esteem variability later in therapy, nor can we empirically speak to any comparisons between early and later self-esteem variability. These early sessions were chosen because this phase of therapy could capture readiness for change before symptom change had already occurred. This study does not address, however, how self-esteem variability might function over the remainder of CT-PD (i.e., sessions 11 to 52), or the state of self-esteem variability at the end of treatment. Given the labor-intensive nature of coding with the CHANGE measure (Hayes et al., 2006), it also was not feasible to code up to 52 sessions for each participant. Future research in this area might examine the stability of self-esteem across the full course of CT-PD, as well as at posttreatment, and compare the strength of variability in different stages as a predictor of treatment outcome.

In addition, we did not assess self-esteem variability in the week or two-week period before therapy began, as Roberts et al. (1999) did, so we cannot specify whether self-esteem variability during sessions one through ten represents perturbations as a result of CT-PD, or whether these patients began treatment with already variable self-esteem. However, it is important to consider that AVPD and OCPD are characterized by entrenched and negative views of self (APA, 1994) and that many tools of CT-PD are designed to perturb the maladaptive patterns that contribute to personality disorders, especially one's view of self. Through collaborative activities such as gathering evidence for and against core beliefs, generating alternative balanced thoughts, or testing predictions and expectations via behavioral experiments, the therapist is asking patients to consider information that might challenge and perturb their entrenched belief systems.

In summary, our findings suggest that, as in other systems in nature, some variability might be adaptive in the context of therapeutic change. There is a broad literature on the importance of a stable sense of self in mental health, but when individuals are locked in pathological patterns, as is the case with personality disorders, too much stability can impede change. With some openness, new experiences and corrective information can be introduced to destabilize the old patterns and facilitate movement to a new, more adaptive organization (Hayes et al., 2007; Hayes & Strauss, 1998). This new organization would be relatively stable, but also open to feedback from the environment. Our findings take the self-esteem variability construct to a different context - that of therapy for personality disorders that are characterized by pathological self-criticism, avoidance, and rigidity - and illustrate a different side of variability that we think might enrich this line of research.

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Table 1

Means, standard deviations, and intercorrelations of self-esteem and symptom variables

<i>n</i> =27	1	2	3	4	5	6	7	8	9
1. SE variability	---								
2. SE average level	.16	---							
3. SE baseline	-.19	.59**	---						
4. BDI variability	.08	.20	.10	---					
5. BDI average level	.14	.13	.14	.58**	---				
6. Pre BDI	.19	.07	-.01	.59**	.67***	---			
7. Pre SCID-II	-.04	.11	-.17	-.40*	-.18	-.09	---		
8. Post BDI	-.48*	.15	.25	.29	.25	.26	.36	---	
9. Post SCID-II	-.49**	-.02	.14	-.07	-.002	-.19	.29	.59*	---
Mean	.80	2.90	2.78	4.00	11.37	14.04	-.02	5.74	-.16
(<i>SD</i>)	(.49)	(.73)	(.88)	(3.18)	(6.69)	(7.83)	(1.06)	(8.25)	(.91)

Note. SCID-II = Structured Clinical Interview for DSM-III-R Axis I Disorders. These are the standardized scores of the primary diagnosis (AVPD or OCD) for each individual; SE = self-esteem; BDI = Beck Depression Inventory.

* $p < .05$

** $p < .01$

*** $p < .001$

Summary of hierarchical regression analyses of self-esteem variables predicting personality symptoms and depression at posttreatment, controlling for pretreatment symptoms

Table 2

Predictor	B	SE _B	β	t	R ² Δ	F Δ	df
<u>Posttreatment Outcome: SCID-II symptom severity</u>							
Step 1							
Pre SCID-II	.251	.164	.292	1.529	.086	2.337	1, 25
Step 2							
Pre SCID-II	.232	.149	.270	1.555	.231	3.877 *	2, 23
SE Mean	.031	.219	.025	.143			
SE Variability	-.902	.326	-.484	-2.765 **			
Predictor	B	SE _B	β	t	R ² Δ	F Δ	df
<u>Posttreatment Outcome: BDI symptoms</u>							
Step 1							
Pre BDI	.278	.203	.264	1.368	.070	1.871	1, 25
Step 2							
Pre BDI	.380	.172	.360	2.211 *	.343	6.725 **	2, 23
SE Mean	2.539	1.830	.225	1.387			
SE Variability	-9.950	2.788	-.588	-3.569 **			

Note. SCID-II = Structured Clinical Interview for DSM-III-R Axis II Disorders. These are the standardized scores of the primary diagnosis (AVPD or OCPD) for each individual; SE = self-esteem; BDI = Beck Depression Inventory.

* $p < .05$

** $p < .01$

Table 3

Summary of hierarchical regression analyses of depression variability and average depression predicting personality symptoms and depression at posttreatment, controlling for pretreatment symptoms

Predictor	B	SE _B	β	t	R ² Δ	F Δ	df
Posttreatment Outcome: SCID-II symptom severity							
Step 1							
Pre SCID-II	.251	.164	.292	1.529	.086	2.337	1, 25
Step 2							
Pre SCID-II	.270	.187	.315	1.447	.004	.047	2, 23
BDI Mean	.004	.033	.031	.128			
BDI Variability	.012	.075	.042	.159			
Predictor	B	SE _B	β	t	R ² Δ	F Δ	df
Posttreatment Outcome: BDI symptoms							
Step 1							
Pre BDI	.278	.203	.264	1.368	.070	1.871	1, 25
Step 2							
Pre BDI	.112	.300	.106	.373	.030	.382	2, 23
BDI Mean	.089	.346	.072	.256			
BDI Variability	.481	.669	.185	.719			

Note. SCID-II = Structured Clinical Interview for DSM-III-R Axis I Disorders. These are the standardized scores of the primary diagnosis (AVPD or OCPD) for each individual. SE = self-esteem; BDI = Beck Depression Inventory.

* $p < .05$

** $p < .01$