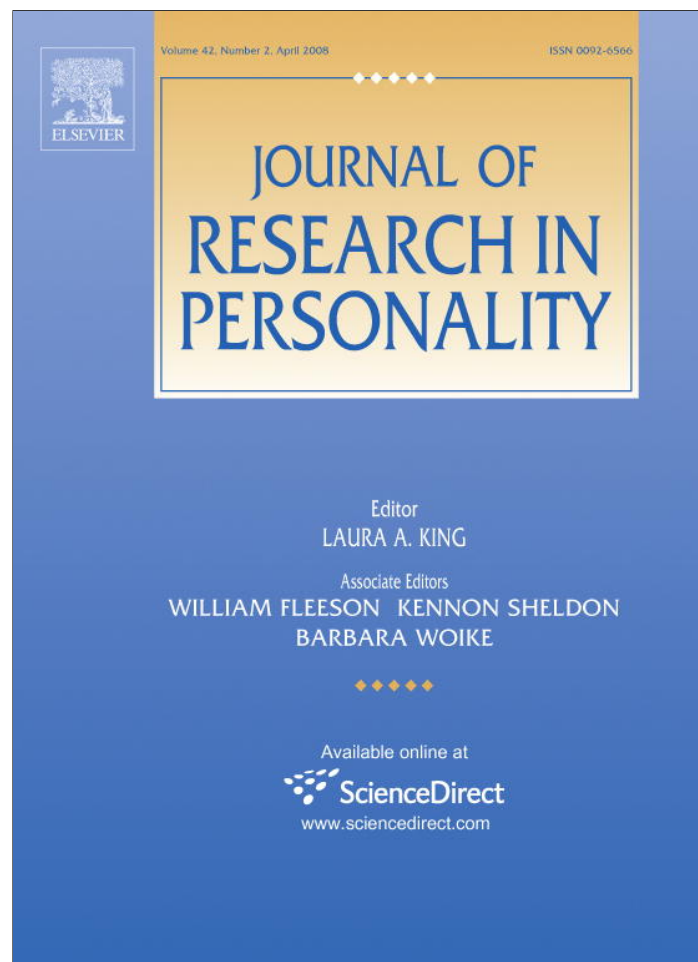


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Psychological defense and self-esteem instability: Is defense style associated with unstable self-esteem? ☆

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Abstract

Defense styles refer to the characteristic employment of automatic psychological processes to maintain and enhance self-esteem. On the basis of clinical literature pertaining to defense styles, it was hypothesized that the maturity of an individual's defenses would be associated with fluctuations in one's state self-esteem over time (i.e., self-esteem instability). To examine this hypothesis, the present study included daily diary measures that tracked the state self-esteem of 123 participants each day for 14 consecutive days. The results of the present study found that higher levels of immature defenses were associated with greater self-esteem instability. For both the intermediate and mature defense styles, their associations with self-esteem instability were moderated by self-esteem level such that higher levels of these defenses were associated with less self-esteem instability among those with low self-esteem.

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1. Introduction

What does it mean to have high self-esteem? This question has elicited considerable interest in recent years as researchers have recognized that possessing high self-esteem is

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not always a good thing. Despite its association with markers of psychological adjustment such as subjective well-being (e.g., Baumeister, Campbell, Krueger, & Vohs, 2003; Diener, 1984; Kaplan, 1975; Robins, Hendin, & Trzesniewski, 2001; Tennen & Affleck, 1993), there also appears to be a *dark side* to high self-esteem. That is, high self-esteem has been linked to a variety of negative outcomes including prejudice (Crocker, Thompson, McGraw, & Ingerman, 1987; Verkuyten, 1996; Verkuyten & Masson, 1995), aggression (Baumeister, Smart, & Boden, 1996; Papps & O'Carroll, 1998), and various strategies to maintain or enhance self-esteem (Baumeister, Heatherton, & Tice, 1993; Baumeister, Tice, & Hutton, 1989; Blaine & Crocker, 1993; Fitch, 1970; Gibbons & McCoy, 1991; Miller & Ross, 1975; Tice, 1991).

In an effort to better understand how high self-esteem can be associated with both positive and negative outcomes, contemporary theorists (e.g., Deci & Ryan, 1995; Kernis, 2003) have proposed that there are actually two forms of high self-esteem: *secure* high self-esteem and *fragile* high self-esteem. Secure high self-esteem—which originated in the work of Carl Rogers (1959, 1961)—reflects positive attitudes toward the self that are realistic, well-anchored, and resistant to threat. Individuals with secure high self-esteem have a solid foundation for their feelings of self-worth that does not require constant validation. Further, these individuals are able to recognize and acknowledge their weaknesses without feeling threatened by their own lack of perfection. In contrast, fragile high self-esteem refers to feelings of self-worth that are vulnerable to challenge, require constant validation, and rely upon some degree of self-deception (see Kernis, 2003 for a review).

The model of *self-esteem instability* developed by Kernis and his colleagues (see Kernis, 2005 for a review) is often used to distinguish between secure and fragile self-esteem. Self-esteem instability refers to transient fluctuations in moment-to-moment feelings of self-worth (i.e., state self-esteem) over time (Kernis, Cornell, Sun, Berry, & Harlow, 1993; Kernis, Grannemann, & Barclay, 1989; Kernis, Grannemann, & Mathis, 1991; Savin-Williams & Demo, 1983). According to the model of self-esteem instability, individuals with stable high self-esteem are believed to possess a solid basis for their positive feelings of self-worth. As a result, the self-esteem of these individuals is relatively unaffected by events that may have an evaluative component. That is, the solid foundation for their feelings of self-worth protects individuals with stable high self-esteem from the variety of adversities that individuals frequently encounter in their day-to-day lives. In contrast, individuals with unstable high self-esteem are thought to possess positive feelings about the self that are highly vulnerable to challenge which leads these individuals to behave as if their self-esteem is constantly at stake (Greenier et al., 1999; Kernis, Brown, & Brody, 2000; Kernis et al., 1993; Kernis, Greenier, Herlocker, Whisenhunt, & Abend, 1997; Waschull & Kernis, 1996).

In recent years, a rapidly growing body of research has documented the consequences and correlates of self-esteem instability. One relatively consistent finding from this research is that self-esteem instability is often associated with aspects of poor psychological adjustment such as depressive symptoms (e.g., de Man, Gutierrez, & Sterk, 2001; Hayes, Harris, & Carver, 2004; Kernis et al., 1998; Roberts & Gotlib, 1997; Roberts & Kassel, 1997; Roberts & Monroe, 1992). Additional studies have found the relationship between self-esteem instability and psychological adjustment to be moderated by self-esteem level. For example, individuals with unstable *high* self-esteem have been shown to possess the highest levels of anger and hostility (Kernis et al., 1989; see Esposito,

Kobak, & Little, 2005 for complementary results among children) as well as the greatest cardiovascular responses to performance feedback (Seery, Blascovich, Weisbuch, & Vick, 2004), whereas those with unstable *low* self-esteem have been found to possess elevated levels of depressive symptoms (Butler, Hokanson, & Flynn, 1994), suicidal ideation (de Man & Gutierrez, 2002), and borderline personality features (Zeigler-Hill & Abraham, 2006). In contrast, individuals with stable high self-esteem have often been found to possess the highest levels of psychological adjustment (e.g., Paradise & Kernis, 2002).

Although previous research has demonstrated that individuals with unstable self-esteem engage in defensive processes that are both self-aggrandizing (Kernis, Grannemann, & Barclay, 1992; Kernis et al., 1997) and self-protective (Kernis et al., 1993; Newman & Wadas, 1997; Waschull & Kernis, 1996), the relationship between self-esteem instability and specific defense mechanisms has remained unexamined. Defense mechanisms are defined by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000) as “automatic psychological processes that protect the individual against anxiety and from the awareness of internal or external dangers or stressors” (p. 751). Defense mechanisms were first proposed by Freud (1894/1962) as an explanation for the modification and distortion of reality individuals used to protect themselves from awareness of their unacceptable thoughts, impulses, or wishes.

Modern personality and social psychology has largely rejected Freud’s (1894/1962) notion that personality is based on early attempts to disguise or ignore one’s unacceptable desires or impulses; however, interest in the process of psychological defense has remained quite strong. Recent research and theory has suggested that defense mechanisms may also be important for maintaining and enhancing self-esteem (e.g., Baumeister, Dale, & Sommer, 1998; Cooper, 1998; Fenichel, 1945; Giovacchini, 1984; Kohut, 1971; Stolorow & Lachmann, 1980). This emphasis on the self-esteem protective properties of defense mechanisms is consistent with current perspectives in social and personality psychology such as Self-Evaluation Maintenance Theory (Tesser, 1988), Self-Affirmation Theory (Steele, 1988), and Terror Management Theory (Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004) which emphasize the employment of defensive processes to regulate self-esteem.

Previous research concerning defense mechanisms has established that defenses are arranged along a continuum ranging from immature defenses (e.g., splitting, denial), through intermediate defenses (e.g., idealization, undoing), to mature defenses (e.g., humor, sublimation; Bond, Gardner, Christian, & Sigal, 1983; Engel, 1962; Freud, 1937; Haan, 1977; Lazarus, 1983; Menninger, 1963; Perry & Cooper, 1989; Vaillant, 1977, 1992). Immature defenses are typically associated with negative outcomes such as anxiety, depression, and eating disorders (Bond & Perry, 2004; Bouchard & Theriault, 2003; Kipper, Blaya, & Teruchkin, 2004; Romans, Martin, Morris, & Herbison, 1999; Spinhoven & Kooiman, 1997; Steiger & Houle, 1991; Steiner, 1990; Ungerer, Waters, Barnett, & Dolby, 1997), whereas mature defenses are usually related to positive outcomes such as job success and life satisfaction (e.g., Vaillant, 1976, 1992; Vaillant & Mukamal, 2001). Although the measurement of defense mechanisms remains controversial (e.g., Davidson & MacGregor, 1998), the most commonly used measure of defense is the Defense Style Questionnaire (Bond et al., 1983). The Defense Style Questionnaire is a self-report measure of characteristic defense styles (i.e., clusters of developmentally similar defense mechanisms) which has been shown to be associated with psychopathology and psychotherapy outcomes such that more immature defenses predict higher levels of pathology and less positive therapeutic outcomes than more mature defenses (see Bond, 2004 for a review).

Due to the importance of defense mechanisms for regulating the reactions of individuals to everyday experiences (Vaillant, 1992, 1994), it is reasonable to propose that defense style may be associated with indicators of instability. That is, characteristic defense styles may either exacerbate or attenuate responses to experiences as a result of defense mechanisms altering perceptions of the self, others, and experiences (Vaillant, 1971). For example, Koenigsberg et al. (2001, 2002) found that both the immature and intermediate defense styles were associated with unstable affect. This affective instability was attributed to the relatively large degree of reality distortion associated with immature and intermediate defenses (see Vaillant, 1994). Consistent with the results of Koenigsberg et al. (2001, 2002), the present study examines whether defense styles are associated with self-esteem instability. More specifically, our simple predictions for the immature and intermediate defense styles were that these defenses would be associated with unstable self-esteem because these defenses distort reality in such a way that individuals may experience shifts in their feelings of self-worth over time. For example, many of the immature (e.g., splitting, devaluation) and intermediate defenses (e.g., idealization) are associated with simplistic perceptions of the self and others as being either *all good* or *all bad*. As the salience of these extreme cognitive representations shift over time, state self-esteem may change in accordance (see Zeigler-Hill & Showers, 2007 for similar results concerning evaluative organization). The simple prediction for mature defenses was that these defenses would be associated with more stable self-esteem because of their relatively low levels of reality distortion. That is, we predicted that the self-esteem of these individuals would not change very much over time because their views of themselves and others were less distorted and, thus, less reactive to evaluative events.

It is likely that self-esteem level may moderate the association between defense style and self-esteem instability. Self-esteem level was included in the present study because it has been shown to moderate the association between self-esteem instability and psychological functioning (see Kernis, 2005 for a review). Self-esteem level was considered to be particularly important for the present studies because defenses are thought to be employed to protect individuals from either internal or external events that are inconsistent with one's self-concept (see Baumeister et al., 1998). That is, defense mechanisms may buffer an individual's self-esteem by protecting the individual from events or information that is inconsistent with one's self-concept. For example, an individual with high self-esteem should be most likely to employ defenses following exposure to negative events that threaten one's positive self-views. When successful, these defenses should maintain the high self-esteem level of the individual resulting in stable high self-esteem, whereas the unsuccessful use of these defenses should result in temporary drops in state self-esteem (i.e., unstable self-esteem). Among individuals with high self-esteem, we believe that our simple predictions will be supported. That is, immature and intermediate defenses will be associated with unstable self-esteem, whereas mature defenses will be linked with stable self-esteem.

If the purpose of defense mechanisms among those with high self-esteem is to protect their self-concepts from negative information that is inconsistent with their positive self-views, then what purpose do defenses serve among those with low self-esteem? As with high self-esteem individuals, it seems that defenses would serve to protect the current self-esteem of those with low self-esteem. That is, the primary purpose of defenses should be to protect these individuals from information that is inconsistent with their self-concepts. Although the self-concepts of individuals with low self-esteem do contain more negative information than the self-concepts of those with high self-esteem, their self-concepts

are better characterized as uncertain and conflicted rather than entirely negative (Campbell & Lavallee, 1993). The motivations to self-enhance and self-verify are likely to conflict for those with low self-esteem (i.e., cognitive-affective crossfire; Swann, Griffin, Predmore, & Gaines, 1987). That is, the affective system of individuals with low self-esteem may desire positive feedback from their social environment (self-enhancement); however, the cognitive system may only be willing to accept social feedback that is consistent with the somewhat negative self-beliefs which characterize those with low self-esteem (self-verification). One apparent consequence of the uncertainty of low self-esteem individuals is that they tend to be highly responsive to both positive and negative events, whereas those with high self-esteem are only responsive to positive events (Campbell, 1990; Campbell & Fairey, 1985). Given the uncertain self-concepts of those with low self-esteem and their greater responsiveness to evaluative events, it is not terribly surprising that those with low self-esteem typically report greater self-esteem instability than those with high self-esteem (e.g., Kernis et al., 1989; Zeigler-Hill & Showers, 2007). Although our predictions were less certain for those with low self-esteem, we believe that immature defenses will be associated with unstable self-esteem, whereas mature defenses may serve to stabilize the state self-esteem of these individuals despite their uncertain and conflicted self-concepts. It is unclear whether intermediate defenses will be sufficient for stabilizing the typically unstable state self-esteem of those with low self-esteem.

Measures of narcissism and neuroticism were also included in the present study because these constructs have been linked to both self-esteem instability (Rhodewalt, Madrian, & Cheney, 1998; Roberts & Gotlib, 1997) and defense style (Johnson, Bornstein, & Krukonis, 1992; Muris, Winands, & Horselenberg, 2003). These measures were included in an effort to clarify the relationship between defense styles and self-esteem instability.

2. Method

2.1. Participants and procedure

Participants were 171 students (55 men and 116 women) enrolled in undergraduate psychology courses who participated in return for partial fulfillment of a research participation requirement. The mean age of participants was 19.73 years ($SD = 2.57$). The racial/ethnic composition was 63% White, 33% Black, 1% Asian, and 3% Other. During a laboratory session, participants completed measures of defense style, self-esteem level, narcissism, and neuroticism. At the end of the laboratory session, participants were instructed to complete measures of state self-esteem via the internet each evening at approximately 10 pm for 14 consecutive days. Of the 171 participants who began the study, 48 participants were excluded due to failure to complete daily measures for 10 or more days.¹ Analyses were conducted using the 123 remaining participants (38 men and 85 women).

¹ In order to assess self-esteem instability, it is essential that participants complete multiple measures of state self-esteem. As a result, some minimum number of completed state self-esteem measures must be established for participants to be included in the analyses. The decision to only include participants in the final analyses who contributed data for 10 or more days follows the convention established in previous research (e.g., Zeigler-Hill, 2006; Zeigler-Hill & Abraham, 2006; Zeigler-Hill & Showers, 2007). It is important to note that the excluded participants did not differ from those participants included in the final analyses on any of the measures collected during the laboratory session, $|ts| < 1.3$, *ns*.

The 123 participants included in the final analyses submitted a total of 1,456 daily measures.

2.2. Measures

2.2.1. Defense styles

Defense styles were assessed using the Defense Style Questionnaire-40 (DSQ-40; Andrews, Singh, & Bond, 1993). The DSQ-40 is a self-report measure of characteristic defense styles consisting of 40 items to which participants provide ratings of agreement on scales ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). The instrument measures the conscious behavioral derivatives of 20 defense mechanisms organized into three broad defense styles: immature, intermediate (also known as neurotic), and mature. The immature defense style consists of the following defense mechanisms: *rationalization, autistic fantasy, displacement, isolation, dissociation, devaluation, splitting, denial, passive aggression, somatization, acting out, and projection*. The intermediate defense style consists of *reaction formation, idealization, pseudo-altruism, and undoing*. The mature defense style is comprised of the following defense mechanisms: *humor, suppression, sublimation, and anticipation*. The internal consistency coefficient for the immature defense style was high ($\alpha = .82$); whereas, the internal consistency coefficients for the intermediate and mature defense styles were less robust (.58 and .62, respectively). The relatively low internal consistency coefficients for the intermediate and mature defense styles is most likely influenced by the fact that they contain fewer items (i.e., eight items each) than the immature defense style which contains 24 items. Information concerning the reliability and validity of the DSQ-40 has been previously reported (e.g., Andrews et al., 1993; Bond 1995, 2004).

2.2.2. Self-esteem level

Participants completed the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), a well-validated measure of global self-regard (Blaskovich & Tomaka, 1991; Demo, 1985). The RSES consists of 10 items to which participants provide ratings of agreement on scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Participants were instructed to complete the scale according to how they typically or generally feel about themselves. For the present study, the internal consistency of this measure was high, $\alpha = .83$.

2.2.3. Narcissism

Narcissism was measured using the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979). The version of the NPI used in the present research contains 37 true-false statements that Morf and Rhodewalt (1993) adapted from a psychometric analysis of the NPI by Emmons (1987). Previous research has demonstrated the reliability and validity of the NPI (e.g., Emmons, 1987; Raskin & Terry, 1988). For the current sample, the internal consistency of this measure was high, $\alpha = .85$.

2.2.4. Neuroticism

The measure of neuroticism employed in the present study was the neuroticism scale from the Big Five Inventory (BFI; John & Srivastava, 1999). The BFI is a well-validated measure of the Big Five personality traits (see John & Srivastava, 1999 for a review). The neuroticism scale of the BFI consists of 8 potentially descriptive phrases for which participants are asked to provide ratings of agreement on scales ranging from 1

(strongly disagree) to 5 (strongly agree). For the current sample, the internal consistency of this measure was high, $\alpha = .81$.

2.2.5. Self-esteem instability

The method for measuring self-esteem instability was adapted from the procedure used by Kernis and his colleagues (e.g., Kernis et al., 1989). Participants were asked to complete a modified version of the RSES at the end of each day for 14 consecutive days. The RSES was modified to capture state self-esteem by instructing participants to give the response that best reflected how they felt at the moment they completed the form. Responses were made on scales ranging from 0 (strongly disagree) to 9 (strongly agree). The within-subject standard deviation across the repeated assessments of state self-esteem served as the index of self-esteem instability such that higher standard deviations indicated greater self-esteem instability.

3. Results

Table 1 presents the means, standard deviations, and intercorrelations for the measures in the present study. Consistent with previous research (e.g., Greenier et al., 1999; Kernis et al., 1989, 1992; Zeigler-Hill & Abraham, 2006), self-esteem level and self-esteem instability were negatively correlated such that individuals with low self-esteem reported more fluctuations in their state self-esteem, $r = -.21, p < .05$. Gender differences emerged for the present study such that men reported greater reliance upon immature defenses ($M_{Men} = 4.50, M_{Women} = 4.04; t[121] = -2.47, p < .05$), higher levels of narcissism ($M_{Men} = 21.68, M_{Women} = 18.91; t[121] = -2.30, p < .05$), and marginally lower levels of neuroticism ($M_{Men} = 22.18, M_{Women} = 24.27; t[121] = 1.88, p < .07$) than women.

3.1. Defense style and self-esteem instability

To examine whether defense styles were associated with self-esteem instability, a hierarchical multiple regression analysis was conducted predicting self-esteem instability from

Table 1
Intercorrelations and descriptive statistics for measures of defense style, self-esteem level, narcissism, neuroticism, and self-esteem instability

	1	2	3	4	5	6	7
1. Mature defense style	—						
2. Intermediate defense style	.03	—					
3. Immature defense style	-.37***	.25**	—				
4. Self-esteem level	.18†	-.04	-.35***	—			
5. Narcissism	.34***	.10	.12	.33***	—		
6. Neuroticism	-.27**	.13	.29***	-.45***	-.33***	—	
7. Self-esteem instability	.07	.14	.40***	-.21*	.14	.19*	—
Mean	5.43	5.32	4.19	4.23	19.76	2.95	.64
Standard deviation	1.19	1.16	.97	.76	6.29	.72	.47

† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

self-esteem level, narcissism, neuroticism, sex, and the defense styles. All continuous predictor variables were centered for the purpose of testing interactions (Aiken & West, 1991). Preliminary results showed no significant interactions involving narcissism, neuroticism, or sex, so these interaction terms were trimmed. In the final version of the analysis, the main effect terms for self-esteem level, narcissism, neuroticism, and sex were entered on Step 1. On Step 2, the main effect terms for the mature, intermediate, and immature defense styles were entered. On Step 3, the two-way interactions of self-esteem level with each defense style were entered. These regression analyses were followed by the simple slopes tests recommended by Aiken and West (1991) to describe the interaction of continuous variables.

The results of the regression analysis are presented in Table 2. On Step 1, main effects emerged for self-esteem level ($\beta = -.21, p < .05$) and narcissism ($\beta = .21, p < .05$) such that low levels of self-esteem and high levels of narcissism were associated with greater self-esteem instability. The main effect for neuroticism approached conventional levels of significance ($\beta = .17, p < .10$) such that high levels of neuroticism were marginally associated with greater self-esteem instability. On Step 2, the only main effect to emerge was the effect for the immature defense style such that higher levels of immature defenses were associated with greater self-esteem instability, $\beta = .30, p < .01$. On Step 3, the following interactions reached conventional levels of significance: mature defense style \times self-esteem level ($\beta = .20, p < .05$) and intermediate defense style \times self-esteem level ($\beta = .32, p < .001$). The predicted values for the mature defense style \times self-esteem level interaction are presented in Fig. 1. Simple slopes tests found that high levels of mature defenses were associated with less self-esteem instability for individuals with low self-esteem ($\beta = -.26, p < .05$). For those with high self-esteem, the mature defenses were not associated with self-esteem instability ($\beta = .10, ns$). Taken together, the simple prediction that mature

Table 2
Hierarchical multiple regression of self-esteem instability onto measures of self-esteem level, narcissism, neuroticism, sex, and defense style

Predictors	R^2	B	SE	β	t
<i>Step 1</i>					
Self-esteem level	.12**	–1.48	.70	–.21	–2.14*
Narcissism		.17	.08	.21	2.18*
Neuroticism		1.18	.70	.17	1.69†
Sex		.77	.98	.07	.79
<i>Step 2</i>					
Mature defense style	.20**	–.40	.45	–.09	–.88
Intermediate defense style		–.35	.40	–.08	–.88
Immature defense style		1.57	.60	.30	2.61**
<i>Step 3</i>					
Mature defense style \times self-esteem level	.34***	1.10	.52	.20	2.11*
Intermediate defense style \times self-esteem level		2.32	.66	.32	3.54***
Immature defense style \times self-esteem level		.08	.82	.01	.10

† $p < .10$.
* $p < .05$.
** $p < .01$.
*** $p < .001$.

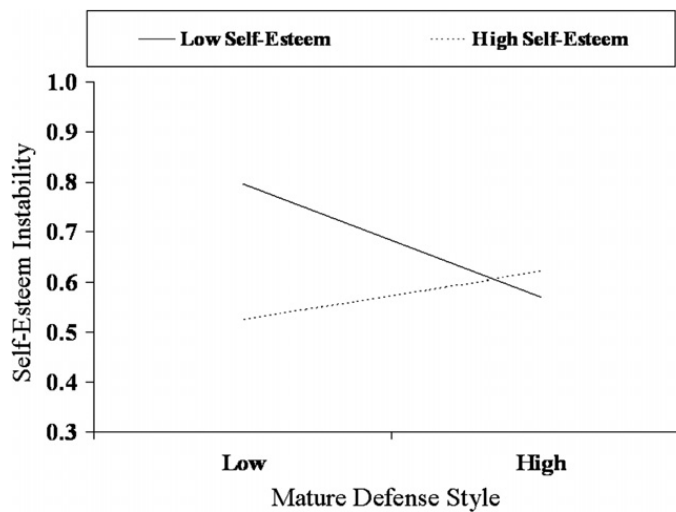


Fig. 1. Adjusted predicted values for self-esteem instability, illustrating the interaction of the mature defense style and self-esteem level at values that are one standard deviation above and below their respective means.

defenses would be associated with more stable self-esteem was only supported among individuals with low self-esteem.

The second effect to emerge from this analysis was the intermediate defense style \times self-esteem level interaction. The predicted values for this interaction are presented in Fig. 2. Similar to the results for mature defenses, simple slopes tests found that high levels of intermediate defenses were associated with less self-esteem instability among individuals with low self-esteem ($\beta = -.54, p < .001$). In contrast, higher levels of intermediate defenses were associated with *greater* self-esteem instability for those with high self-esteem ($\beta = .38, p < .01$). Taken together, these results suggest that intermediate defenses have opposing associations with self-esteem instability depending upon one's self-esteem level.

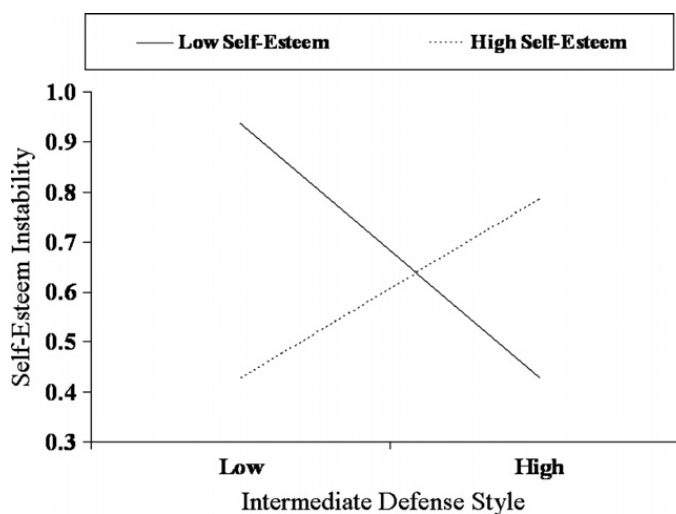


Fig. 2. Adjusted predicted values for self-esteem instability, illustrating the interaction of the intermediate defense style and self-esteem level at values that are one standard deviation above and below their respective means.

That is, intermediate defenses are associated with stable self-esteem for those with low self-esteem, whereas intermediate defenses are linked to unstable self-esteem for those with high self-esteem.

4. Discussion

The results of the present study provide support for the association between defense styles and self-esteem instability. In the present study, each of the defense styles (i.e., mature, intermediate, and immature) was uniquely associated with self-esteem instability even when controlling for narcissism and neuroticism. Consistent with our simple prediction for the immature defense style, this defense was associated with self-esteem instability such that individuals with higher levels of immature defenses possessed greater self-esteem instability. It is important to note that this instability was found for individuals regardless of whether their self-esteem level was low or high. The link between immature defenses and instability may be due to the inability of these immature defenses to protect the self-esteem of individuals from information that is inconsistent with their self-concepts. The failure of immature defenses to serve a stabilizing function may be a result of the high level of reality distortion and simplistic views of the self and others that accompany immature defenses such as splitting. This possibility is consistent with previous research showing that self-esteem instability is associated with borderline personality features (Zeigler-Hill & Abraham, 2006), splitting (Zeigler-Hill, 2007), and evaluative compartmentalization (Zeigler-Hill & Showers, 2007) all of which are characterized by simplistic cognitive representations of the self. Although the purpose of these defensive processes may be to regulate self-esteem by protecting the self-concept from inconsistent information, these overly simplistic views of the self may actually make those who rely upon immature defenses even more susceptible to inconsistent information.

The association between the intermediate defense style and self-esteem instability was moderated by self-esteem level such that higher levels of intermediate defenses were associated with less self-esteem instability for those with low levels of self-esteem, whereas the opposite pattern was found for those with high self-esteem. That is, greater use of intermediate defenses was associated with greater instability for those with high self-esteem. Although the correlational nature of the present study precludes a causal understanding of the relationship between defense styles and self-esteem instability, the present findings may suggest that the benefits associated with high levels of intermediate defenses—at least in terms of possessing self-esteem that is relatively stable over time—are largely found among individuals with relatively low levels of self-esteem. Intermediate defenses may successfully buffer individuals with low self-esteem from information that is inconsistent with their uncertain and conflicted self-concepts. That is, despite their reliance upon reality distortion, intermediate defenses may be adequate for allowing someone with low self-esteem to discount positive feedback from their social environment in order to avoid this potentially inconsistent positive information. However, these defenses may not be adequate to protect those with high self-esteem from the negative information that may conflict with their positive views of themselves.

The simple prediction that mature defenses would be associated with less self-esteem instability was only supported for individuals with relatively low levels of self-esteem. In contrast, individuals with high self-esteem possessed relatively stable state self-esteem regardless of their use of mature defenses. Similar to the results for intermediate defenses,

these findings may suggest that the self-esteem stability advantages of mature defenses are limited to those with relatively low levels of self-esteem. However, unlike the results for intermediate defenses, high levels of mature defenses were not associated with greater self-esteem instability. Rather, the state self-esteem of those with high self-esteem remained stable even when high levels of mature defenses were being employed. If these defenses serve to maintain the self-esteem level of individuals by protecting them from information that is inconsistent with their self-concepts, then the continuing stability among those with high self-esteem when they report high levels of mature defenses may be indicative of their success in regulating the state self-esteem of those who typically possess relatively stable self-esteem. This possibility is consistent with the results showing that high levels of either immature or intermediate defenses were associated with greater instability for these individuals. Taken together, these findings may suggest that mature defenses—and their relative lack of reality distortion—are necessary to protect the positive self-views of those with high self-esteem, whereas either intermediate or mature defenses are sufficient for stabilizing the state self-esteem of those with low self-esteem.

For individuals with low self-esteem, intermediate and mature defenses had similar associations with self-esteem instability such that higher levels of these defenses were associated with less self-esteem instability. This pattern may be due to individuals with low self-esteem being less certain about their self-concepts (Baumeister et al., 1989; Campbell, 1990; Campbell et al., 1996) which may, in turn, lead these individuals to rely more heavily upon environmental cues to tell them how to feel about themselves (Kernis, Paradise, Whittaker, Wheatman, & Goldman, 2000). Intermediate or mature defenses may stabilize the moment-to-moment feelings of self-worth of those with low self-esteem despite their uncertain self-concepts. At the most basic level, intermediate and mature defenses may serve as a buffer to prevent the low self-esteem levels of these individuals from being at the mercy of recent experiences that may provide the individual with feedback that is inconsistent with their self-concepts. The decreased self-esteem instability associated with these defenses would appear to be adaptive given that previous research has shown that unstable low self-esteem is associated with negative outcomes such as depressive symptoms (Butler et al., 1994), suicidal ideation (de Man & Gutierrez, 2002), and borderline personality features (Zeigler-Hill & Abraham, 2006). At the present time, it appears that for individuals with low self-esteem, stability (i.e., individuals never feeling particularly good about themselves) is associated with better outcomes than instability (i.e., individuals feeling better about themselves on occasion but also feeling worse about themselves at other times). However, the consequences of instability among those with low self-esteem have received relatively little empirical attention in comparison to instability among those with high self-esteem. Future research should examine whether intermediate or mature defenses protect individuals with low self-esteem from the negative outcomes that are associated with unstable self-esteem (e.g., depressive symptoms).

Despite the similar relations of intermediate and mature defenses with self-esteem instability for those with low self-esteem, the relations of these defenses with instability diverged for those with high self-esteem. The use of mature defenses was not associated with self-esteem instability for those with high self-esteem even though high levels of immature and intermediate defenses were associated with instability for those individuals. If defenses do serve to protect individuals from inconsistent information, then this result may suggest that mature defenses are at least somewhat effective among those with high self-esteem because their self-esteem remained stable even when using high levels of mature

defenses. In contrast, the increased instability accompanying high levels of immature and intermediate defenses suggest these defenses are inadequate to protect those with high self-esteem from inconsistent information. If an individual with high self-esteem receives negative feedback from their social environment, mature defenses (e.g., suppression) may be able to protect one's self-esteem, whereas immature (e.g., splitting) or intermediate defenses (e.g., undoing) may be less effective in discounting or attenuating the effects of this inconsistent information.

It should be noted that the present research was based on a process model which assumed that defense styles were relatively stable features of the individual that regulate self-esteem and influence reactions to potentially self-relevant events. However, the results of the present study cannot rule out the possibility that the direction of causality may be either bidirectional or reversed. For example, self-esteem instability may lead to the development of certain defense styles through the greater ego-involvement in daily activities which characterize those with unstable self-esteem (e.g., Kernis et al., 1993). Consistent with this possibility, Koenigsberg et al. (2001, 2002) proposed that the link between affective instability and defense styles may be due to affective instability influencing the development and selection of particular defenses. Of course, it is also possible that defense styles and self-esteem instability are both by-products of some third variable. For example, early childhood experiences with parents have been found to be associated with both defense style (Thienemann, Shaw, & Steiner, 1998) and self-esteem instability (Kernis et al., 2000). Thus, it is possible that defense style and self-esteem instability may each have their origin in these early experiences. Future research should attempt to discern the direction of causality between defense style and self-esteem instability.

One important limitation of the present study is that the only measure of psychological defense was the DSQ. Although the DSQ is the most widely used self-report measure of defense mechanisms (Bond, 2004), non-self-report methods (e.g., observer ratings) are often preferred because these measures allow researchers to detect behavioral indicators of defensive processes that may escape the target's awareness (Davidson & MacGregor, 1998). However, methods such as observer ratings are costly, time consuming, and may be plagued by low inter-rater reliability. In comparison, self-report methods for assessing defense mechanisms are cheaply and easily administered. The use of self-report methods for the measurement of defense styles may seem problematic given that defenses are thought to operate outside of conscious awareness (e.g., Davidson & MacGregor, 1998). However, the habitual employment of specific defenses is believed to result in conscious derivatives that can be identified by the individual (Andrews et al., 1993). For example, individuals who rely upon humor may be able to recognize that they have a tendency to employ this defense during stressful situations even though they may be unaware this behavior is used to reduce negative affect and protect self-esteem. In addition, individuals are also likely to become aware of their characteristic defense style when these defenses are ineffective or other individuals point out their defensive behavior (Bond et al., 1983). Thus, it appears that self-report may be an effective means for assessing defense style (see Bond, 2004 for a review). However, future research should examine the association between self-esteem instability and defensiveness using non-self-report methods such as autobiographical reports (e.g., Vaillant, Bond, & Vaillant, 1986), projective tests (e.g., Cramer, 1991), or behavioral measures (e.g., Barrett, Williams, & Fong, 2002).

5. Conclusion

The findings of the present study provide initial evidence that defense style is associated with self-esteem instability. Immature defenses were associated with self-esteem instability such that individuals with higher levels of immature defenses were found to possess greater self-esteem instability regardless of their self-esteem level. In contrast, the relations of intermediate and mature defenses with self-esteem instability were moderated by self-esteem level. More specifically, higher levels of either intermediate or mature defenses were associated with less self-esteem instability among individuals with low self-esteem. Among those with high self-esteem, the links between these defenses and self-esteem instability diverged such that high levels of intermediate defenses were associated with greater instability, whereas greater use of mature defenses was not associated with an increase in self-esteem instability. The results of the present study suggest that defense style may serve an important role in understanding self-esteem instability.

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