CONSTRUCT VALIDITY OF THE MMPI-2-RF'S DEMORALIZATION (RCd) SCALE

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Construct Validity of the MMPI-2-RF's Demoralization (RCd) Scale

The Minnesota Multiphasic Personality Inventory-2-Restructued Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008/2011) is an extensively revised version of the MMPI-2, one of the most widely used measures of personality and psychopathology in clinical practice (Camara, Nathan, & Puente, 2000). Its core feature, the Restructured Clinical (RC) Scales, measure the clinically relevant content assessed by the Clinical Scales of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher et al., 2001). These scales were created in response to concerns raised about the psychometric properties of the MMPI-2 Clinical Scales, including substantial intercorrelations between and significant heterogeneity within scales (Helmes & Reddon, 1993; Ben-Porath, 2012).

Research occurring subsequent to RC Scale development has suggested that Tellegen and colleague's (2003) efforts to address the limitations of the original Clinical Scales were successful, as several studies reported improved psychometric properties for the RC Scales over their predecessors (Simms, Casillas, Clark, Watson & Doebbeling, 2005; Tellegen, Ben-Porath, & Sellbom, 2009). External correlate analyses indicate RC Scale scores have convergent validity as high as or, in select cases, higher than scores on the original Clinical Scales (Graham, 2012), as well as substantially improved discriminant validity (Sellbom, Ben-Porath, & Graham, 2006; Tellegen et al., 2003). These findings have been demonstrated in nonclinical (Forbey & Ben-Porath, 2008), psychiatric inpatient (Arbisi, Sellbom, & Ben-Porath, 2008; Handel & Archer, 2008), forensic (Sellbom, Ben-Porath, Baum, Erez, & Gregory, 2008), substance abuse (Forbey & Ben-Porath, 2007), and private practice (Sellbom, Graham, & Schenk, 2006) settings. Overall, this pattern of results suggests that the RC Scales may be purer measures of the core components of the original Clinical Scales (Sellbom et al. 2006).

Improvement in the psychometric properties of the RC Scales was achieved in part by the removal of a common factor that had saturated the Clinical Scales, demoralization. Broadly, demoralization is characterized by pervasive dysphoric, unhappy mood, helplessness, inability to cope, and general dissatisfaction with life (Tellegen et al., 2003). Tellegen (1985) identified this subjective emotional discomfort component as a source of pervasive shared variance between scales on self-report inventories assessing emotional adjustment, including the MMPI's Clinical Scales. Construction of the RC Scales, therefore, began by distinguishing and extracting this common factor (Ben-Porath, 2012). Tellegen and colleagues (2003) based their development of the demoralization scale on a theoretical basis, relying on past research regarding the demoralization construct (see the succeeding Nomological Net of Demoralization section), as well as Watson and Tellegen's (1985) structure of mood. This two-dimensional map consists of two major factors, positive activation (PA) on the vertical axis, and negative activation (NA) on the horizontal axis. At a 45-degree rotation from PA-NA, Watson and Tellegen included additional dimensions, Pleasantness-versus-Unpleasantness and Engagement-versus-Disengagement. The Unpleasantness pole of the bipolar Pleasantness-versus-Unpleasantness axis provided the conceptual basis upon which RCd was based (Tellegen et al., 2003). Accordingly, RCd was constructed by identifying MMPI-2 items assessing demoralization via factor analyses of items scored on Clinical Scales 2 and 7, which broadly assess depression and anxiety, respectively. These analyses identified 24 items that correspond to general unhappiness, feelings of defeat, low self-efficacy, and poor coping (Ben-Porath, 2012). These items eventually came to make up the MMPI-2-RF Demoralization Scale (RCd), which is one of 9 total scales making up the MMPI-2-RF's RC scales.

Criterion validity studies of RCd scores provide support for their conceptualization as measures of emotional discomfort. For instance, scores on RCd have strong associations with scores on scales related to negative emotionality, and somewhat weaker associations with low positive emotionality (Simms et al., 2005), as well as correlations with measures of global psychopathology, insecurity, depression, anxiety, and interpersonal sensitivity (Sellbom, Ben-Porath, & Graham, 2006). Scores on RCd have been significantly positively correlated with measures of somatic symptoms, depression, pessimism, insecurity, and anxiety in an Israeli sample (Shkalim, 2015), with depression, suicidality, helplessness/hopelessness, and decreased energy in psychiatric inpatients (Arbisi, et al., 2008), with measures of anxiety and depression in a nonclinical sample (Forbey & Ben-Porath, 2008), and with depression and negative emotionality in a private practice setting (Sellbom, Graham, & Schenk, 2006). Moreover, RCd scores have been identified as the primary marker of distress disorders (i.e., Major Depressive Disorder [MDD], Generalized Anxiety [GAD], and Post-Traumatic Stress Disorder), and have demonstrated weaker correlations with fear disorders (i.e., Agoraphobia, Specific Phobia, Social Phobia, Obsessive-Compulsive Disorder) (Sellbom, Ben-Porath, & Bagby, 2008). Scores on RCd have also demonstrated discriminant validity, correlating minimally with measures of peculiar thought processes and behavioral disinhibition (Forbey & Ben-Porath, 2008; Arbisi, et al., 2008).

Although RCd scores have been well-established as measures of the affective components of general emotional discomfort, no significant effort has yet been made to demonstrate the construct validity of RCd scores. The current study, therefore, sought to place scores on RCd within the larger demoralization nomological network (Cronbach & Meehl, 1955). Specifically, I examined associations between RCd scores and broader demoralization-

related characteristics relevant to those discussed by Tellegen and colleagues (2003) in their description of RCd's theoretical basis.

The Nomological Net of Demoralization

One primary goal in establishing the construct validity of RCd scores is to connect them to the broader literature on the general demoralization construct that has been extensively discussed in past research, beginning with the work of Jerome Frank. Frank (1961) identified demoralization as a state of mind associated with psychological patienthood, and theorized that effective psychotherapeutic interventions share components that contribute to a morale-restoring process. Frank (1974) described the demoralized state as resulting from perpetual failure to cope with both internal and external stressors and characterized it by an overarching sense of impotence, despair, isolation, damaged self-esteem, meaninglessness, and perceived social rejection. He theorized that demoralized people perceive themselves as being powerless and unable to change themselves or alter or escape from their environments. Importantly, Frank conceptualized demoralization not as a symptom or syndrome unto itself, but as a state of mind that interacts with psychopathological symptoms. Depression and anxiety, for instance, act as symptomatic expressions of demoralization. For other conditions, such as schizophrenia, psychopathological symptoms may cause demoralization. More broadly, Frank postulated that demoralization may decrease individual coping capacity and heighten susceptibility to failures. Frank further posited that psychopathological dysfunction would be correlated with demoralization, such that the severity of symptoms would wax and wane according to the current degree of demoralization.

Although Frank's conceptualization of demoralization was largely theoretical, psychometric approaches have led to similar conclusions. When developing the Psychiatric

Epidemiology Research Interview (PERI), Dohrenwend, Shrout, Egri, and Mendelsohn (1980)

found that eight of instrument's scales were correlated to such a high degree that they likely

measured the same construct. Specifically, the authors noted that these scales, which included

measures of sadness, psychophysiological symptoms, anxiety, poor self-esteem,

hopelessness/helplessness, dread, confused thinking, and perceived physical health, were

"remarkably similar" (p. 1232) to demoralization as it had been conceptualized by Frank

(1961/1991). Accordingly, they combined these related scales into an overall measure of

demoralization, which has evidenced utility in distinguishing psychiatric patients from non-

patients. (Dohrenwend et al., 1980; Fitcher, Quadflieg, & Brandl, 1993).

  Schmale and Engel (1967) have also described the giving-up—given-up complex, a

process similar to Frank's demoralization. Engel (1968) described the giving-up—given-up

complex as a psychological state of discouragement frequently manifested before the onset of

illness. The giving-up—given-up complex was purportedly characterized by an inability to cope,

psychological impotence, helplessness/hopelessness, depreciated self-image, loss of satisfaction

from roles or relationships in life, a sense that past performance and coping no longer serve as an

effective guide for the future, diminished ability to hope for or imagine a successful future, and a

reemergence of memories of preceding instances of giving up. Engel further characterized the

giving-up state as fluid, during which sufferers might oscillate between giving-up and struggling

against it. Schmale and Engel (1967) theorized that these unpleasant, distressed feelings may be

vocalized via such phrases as "It's no use," or "I can't take it anymore," and they may ultimately

culminate in a given-up stage wherein the sufferer experiences a complete loss of gratification.

  de Figueiredo and Frank (1982) have also posited that demoralization constituted a

combination of distress – such as symptoms of anxiety, depression, anger, sadness, and

resentment – and subjective incompetence (SI). They maintained that SI, a self-perceived incapacity to act or express oneself in response to a specific stressor, resulting in doubts and uncertainty about the future, is the clinical hallmark of demoralization (de Figeiredo & Frank, 1982). SI occurs in response to stressful events wherein an individual's assumptions about others and the self, as well as the continuity between the past, present, and future, are violated. They maintained that demoralization results when SI is combined with nonspecific distress or distress associated with a psychopathological condition. Further, de Figueiredo (2013) theorized that SI and distress are likely to co-occur to produce demoralization when perceived stress is high and related to the individual's self-esteem, and/or when perceived social support is low. In this conceptualization, demoralization is a process that begins with SI and non-pathological distress (e.g., common feelings of sadness, vulnerability, and sadness) and, when prolonged, increases in severity. The most severe cases manifest as a pathological syndrome involving SI, hopelessness/hopelessness, and either non-specific or specific distress that results in significant impairment (de Figueiredo, 2013).

Gruenberg (1967) has also defined a state of chronic demoralization, which he termed social breakdown syndrome (SBS). SBS refers to secondary dysfunction common to forms of chronic non-specific psychoses, culminating from a pattern of failures in which an individual is unable to meet life's demands, both self-imposed and external (Gruenberg, 1967). Gruenberg (1967) theorized that SBS involves the relationship between the person with a mental illness and their social and environmental conditions, which manifests as progressively disordered social functioning. He believed that SBS in its beginning stages may manifest as decreases in recreational activity or social initiative, whereas severe SBS involved extreme negligence of self-care or the inability to care for oneself (Gruenberg, 1967). Acute demoralization, conversely, has

been conceptualized by Korchin (1975) as a "crisis," during which individuals feel powerless and unable to cope with a specific existing stressor.

Cassell (1991) later described demoralization in the medical context as a state of suffering. According to Cassell (1991), suffering referred to severe distress corresponding to impending threats to the wholeness of the person, wherein the person comprises a complicated psychological and emotional entity. Importantly, Cassell (1991) theorized that wholeness of the person extends beyond biology and the experience of physical pain, and can involve threats to the self, family, social group, or other internal and external systems. In the context of physical illness, he believed suffering developed from a sense of loss of control, hopelessness about their condition, and loss of critical elements of an individual's sense of self.

Most recently, Clarke & Kissane (2002) have argued that demoralization constitutes a separate, formal diagnostic category, which they termed demoralization syndrome. The authors defined demoralization syndrome as consisting of affective symptoms such as hopelessness or loss of meaning, cognitive symptoms related to a sense of being trapped, pessimism, and helplessness, loss of drive or motivation, lack of social support or social isolation for a period lasting more than two weeks. In contrast to past definitions of demoralization, which conceptualized it as a state that coincided and interacted with other diagnoses, a diagnosis of demoralization syndrome as defined by Clark and Kissane (2002) requires that MDD or another psychiatric disorder is not the individual's primary diagnosis. Similar to de Figueirdo (2013), Clarke and Kissane (2002) characterized demoralization as a process beginning with dysphoria and advancing through more severe stages including helplessness, a sense of failure, and finally to existential despair and meaninglessness.

Distinguishing Demoralization from Similar Constructs

Several of the characteristics and features of demoralization as previously described bear phenotypic similarity to major depressive disorder (MDD). Past research, however, has distinguished demoralization from MDD. In the medical illness literature, latent trait analyses on hospital patients have revealed that demoralization and anhedonic depression constitute two distinct dimensions (Clarke, Mackinnon, Smith, McKenzie, & Herrman, 2000; Clarke, Smith, Dowe, & McKenzie, 2003). Using DSM-IV criteria, the Diagnostic Criteria for Psychosomatic Research, and semi-structured interviews, Mangelli and colleagues (2005) were able to differentiate between demoralization and depression in medical outpatients, finding both overlap wherein patients were both depressed and demoralized, as well as patients who were classified as only one or the other.

In clinical research, Joiner at al., (2005) found that while demoralization often occurs in the context of MDD, anhedonia is related uniquely to depression, concluding that "depression is clearly more than just distress, demoralization, or depressed mood … depressed mood, although very common among those experiencing depression, is not very specific to the syndrome; anhedonia, by contrast, is more unique to major depression" (p. 230). This finding corroborates Clark and Watson's (1991) Tripartite Model, which posits that anhedonia specifically characterizes MDD, where psychological hyperarousal distinguishes anxiety, and negative affect acts as a non-specific factor relating to both. Beyond anhedonia, other factors have been hypothesized to differentiate demoralization from depression. Namely, Clarke and Kissane (2002) concluded that, due to its association with hopelessness, demoralization is associated with suicidal intent rather than depression. de Figueiredo (1999) theorized that demoralization and depression could be distinguished by the magnitude and direction of loss of motivation. Namely,

depressed persons suffer from loss of magnitude of motivation even when the direction of said motivation is known, while a demoralized individual may be strongly motivated, but prohibited from acting due to lack of direction caused by SI.

Demoralization is also distinct from the construct NA or neuroticism, although the two have been strongly correlated in past studies (Sellbom et al., 2008; Simms et al., 2005). This relationship, however, is expected given past research showing that demoralization correlates more strongly with NA than PA (Tellegen, Watson, & Clark, 1999a, 1999b). Despite this association, these components are separable in the hierarchical structure of mood. Building upon Watson and Tellegen's (1985) structure of mood, Tellegen et al. (1999a) conducted exploratory factor analyses on 29 total mood items, resulting in nine first-order factors that encompass discrete emotions, two second-order factors including both PA and NA, and, finally, an overarching bipolar third-order factor representing Happiness-Versus-Unhappiness. This dimension, which emerged as relatively independent of the NA and PA axes at the next level, corresponds to Watson and Tellegen's (1985) Pleasantness-Versus-Unpleasantness, which was a major theoretical basis upon which RCd was constructed. Further, Sellbom et al. (2008) found that a model including demoralization, in addition to NA and PA, increased the variance accounted for in anxiety and mood disorders compared to a model containing only NA and PA. Namely, the model including demoralization provided more specific and differential personality markers of mood and anxiety disorders, with demoralization serving as a primary marker of distress disorders (i.e., MDD, Dysthymia, Generalized Anxiety Disorder, Post-Traumatic Stress Disorder), NA corresponding most strongly to fear disorders (i.e., Social Phobia, Specific Phobia, Obsessive-Compulsive Disorder, and Agoraphobia), and low PA characterizing MDD and social phobia.

Beyond statistical evidence for the conceptualization of demoralization as distinct from NA, the two have differential correlates. Simms et al. (2005) found that demoralization as measured by RCd was associated with low positive emotionality, while NA as conceptualized by RC7 was not. Further, RCd has a stronger association with general maladjustment and symptoms of generalized anxiety disorder, while RC7 is more highly correlated with fear, anger, stress reactivity, and intrusive ideation (Tellegen et al., 2003; Sellbom & Ben-Porath, 2005; Simms et al., 2005).

RCd Scores in the Nomological Net

Given the rich history of the demoralization construct just reviewed, it is important that RCd scores be placed within this broader nomological network. Doing so provides additional knowledge about the ability of scores on RCd to comprehensively assess the construct of demoralization, which could add incrementally to our current knowledge of RCd's utility and enhance interpretation by providing clinicians with more precise information about the significance of an individual's RCd score. Accordingly, the following study examined the construct validity of RCd scores within the larger network of demoralization by correlating RCd scores with a series of demoralization-related characteristics within demoralization's nomological net. As the previously reviewed literature demonstrates, helplessness/hopelessness, inefficacy, and perceived or actual interpersonal dysfunction are core components of demoralization. As such, selected criterion variables fell within these three broader categories. The following sections describe the variables selected as criterion for this study, as well as the theoretical rationales for their inclusion.

Helplessness/Hopelessness-Related Variables

Scores on RCd are likely related to working memory deficits, namely those giving rise to cognitive rigidity. Cognitive rigidity refers to a cognitive style characterized by inflexible perceptions of and reactions to the environment, resulting in dichotomous thinking and deficits in identifying and formulating alternate solutions to difficulties. (Patsiokas, Clum, & Luscomb, 1979). Schotte & Clum (1982) posit that cognitively rigid individuals are unable to develop the alternative solutions necessary to cope effectively when placed under stress. Thus, these individuals subsequently develop corresponding feelings of hopelessness and helplessness. As previously discussed, helplessness and hopelessness are integral components of nearly all conceptualizations of demoralization (Schmale & Engel, 1967; Dohrenwend et al., 1980; Frank, 1974; Clark & Kissane, 2002). Scores on RCd should, therefore, reflect individual differences in problem-solving ability associated with cognitive rigidity. Moreover, cognitive rigidity has been associated in past studies with attempted suicide (Neuringer, 1964). Cognitive rigidity predicts suicidal ideation in individuals with past suicide attempts even after controlling for existing mood or anxiety disorders and hopelessness (Miranda, Gallagher, Bauchner, Vaysman, & Marroquin, 2012). Existing research also indicates that demoralization is associated with suicide and suicidal ideation (Frank 1961; Ben-Porath, 2012). These associations bolster support for the hypothesis that scores on RCd will be associated with cognitive rigidity.

Additionally, scores on RCd should be associated with aspects of pessimistic attribution style. In the hopelessness theory of depression, Abramson, Metalsky and Alloy (1989) posit that attributing negative life events to global (i.e., applying across situations) and stable (i.e., permanent) causes ultimately increases the likelihood of an individual experiencing generalized hopelessness. Although this model has been conceptualized in the context of depression, some

studies have found that pessimistic attribution styles are also associated with anxiety pathology[1] (Ahrens & Haaga, 1993; Ralph & Mineka, 1998; Reardon & Williams, 2006). This suggests that this explanatory style may be more broadly related to internalizing psychopathology rather than depression specifically. Further, when internal (e.g., directed at oneself) attributions occur concurrently, lowered self-esteem is also more likely to occur (Abramson et al., 1989). Due to demoralization's associations both with hopelessness and lowered self-esteem (Frank, 1974; Schmale & Engel, 1967; Dohrenwend et al., 1980), RCd scores should be similarly related to pessimistic attribution styles that interact with negative life events to produce those outcomes.

Inefficacy-Related Variables

Scores on RCd should be negatively correlated with general self-efficacy. General self-efficacy refers to an individual's pervasive judgment of his or her ability to accomplish goals and complete tasks across diverse circumstances (Smith, 1989). While state self-efficacy varies according to situation demands, general self-efficacy represents trait-like beliefs in overall ability to perform (Chen et al., 2001). These generalized expectations develop as a result of past successes and failures in various situations, and influence beliefs concerning mastery in new situations (Sherer, et al., 1982). Conceptualizations of demoralization identify persistent perceived failure as a component (Frank, 1961; Schmale & Engel, 1967; Gruenberg, 1967; Clark & Kissane, 2002). Thus, RCd scores should reflect the outcome of those persistent failures, a lack of general self-efficacy. Furthermore, general self-efficacy is a powerful positive influence on state self-efficacy (Eden, 1988), such that the tendency to feel inefficacious across situations influences an individual's sense of self-efficacy in regard to particular tasks and situations.

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[1] Other studies investigating explanatory style have found specific relationships to depression (Heimberg, Vermilyea, Dodge, Becker, & Barlow, 1987; Metalsky & Joiner, 1992). Overall, evidence regarding the specificity of pessimistic explanatory style to depression is mixed as little research has investigated this attributional style and anxiety disorders (Seligman & Burns, 1991; Mineka, Pury, & Luten, 1995).

Accordingly, low general self-efficacy should also correlate with RCd scores in that it

predisposes individuals to feel inefficacious, another core component of demoralization.

Scores on RCd should also reflect individual differences in locus of control. Locus of

control refers to beliefs about sources of reinforcement. An external locus of control corresponds

to beliefs that rewards result from external circumstances (e.g., luck, fate, chance, etc.) and

internal locus of control corresponds to beliefs that rewards result from internal forces (e.g.,

personal strengths, diligence, skills, etc.; Rotter, 1966). In his theory of self-efficacy, Bandura

(1977) posited that mastery experiences build beliefs in self-efficacy, but that attributions of

cause can limit this effect. Specifically, if an individual succeeds at a task, but attributes his or

her performance to external forces, self-efficacy enhancement is less likely to occur. Given the

association between RCd scores and experiences of inefficacy, scores on RCd should correlate

with external locus of control, an individual difference contributing to inefficacious feelings.

Judge, Locke, & Durham (1997) proposed that self-efficacy, locus of control, and two

other constructs previously empirically correlated with scores on RCd (self-esteem and

emotional stability/neuroticism) reflect a higher-order construct, core self-evaluation. Core self-

evaluation refers to fundamental beliefs individuals possess about both themselves and their

relationships to the world at large (Judge, Erez, & Bono, 1998). Broadly, core self-evaluations

reflects a "basic, fundamental appraisal of one's worthiness, effectiveness, and capability as a

person" (Judge, Erez, Bono, Thoresen, 2003 pp. 3). This description is phenomenologically

similar to aspects of demoralization. Given this consideration, as well as past findings

demonstrating existing associations between RCd scores and self-esteem and neuroticism, two

components of core self-evaluation, scores on RCd should also be associated with this construct.

Scores on RCd should also reflect trait variance in ego resiliency. Ego resiliency refers to an individual's capacity to adapt to stressors, both internal and external, or, more specifically, individual differences in the ability to alter characteristic levels and expression of ego control to effectively function in the environment (Block & Block, 1980). On the low end of the spectrum, an individual may exhibit ego brittleness, manifesting as limited adaptive flexibility, a tendency to become disorganized and perseverate under stress, restricted capacity to respond to demands, and problems returning to normal after traumatic experiences (Block & Block, 1980). High levels of ego resiliency, conversely, correlate with mastery, competence, meaningful engagement, and effective interpersonal skills (Klohnen, 1996). Further, ego resiliency's negative association with outcomes such as being self-defeating, having low frustration tolerance, and experiencing emotional blandness (Letzring, Block, & Funder, 2004), suggests that ego resiliency levels should also be negatively correlated with scores on RCd.

Interpersonal Dysfunction-Related Variables

Scores on RCd should also be associated with excessive reassurance-seeking, a construct defined by Joiner, Katz, and Lew (1999) as "a maladaptive interpersonal coping strategy specifically aimed at negotiating doubts about one's lovability and worthiness (i.e., self-esteem) and doubts about future prospects and safety (i.e., anxiety)" (pp. 633). Past research has found that individuals with depression are negatively evaluated by others, but only when the depressed individual exhibits excessive reassurance seeking (Katz and Beach, 1997; Joiner & Metalsky, 1995; Joiner, Alfano, & Metalsky, 1993). These findings suggest that excessive reassurance seeking may be the mechanism through which depressed individuals develop interpersonal difficulties (Joiner et al., 1999). However, when threat-related reassurance seeking behaviors (i.e, reassurance-seeking as a safety behavior in response to heightened attention to perceived threats

and beliefs about inability to cope with these threats) are considered, excessive reassurance-

seeking is associated with symptoms of both anxiety and depression (Cougle et al., 2011). This

suggests that excessive reassurance seeking may not be a specific feature of depression, but

rather may be related to the distress component common across these disorders. Excessive

reassurance seeking has also been associated with uncertainty about the self and about the future

(Joiner et al., 1999). Since the construct of demoralization involves a disruptive sense of self,

hopelessness regarding the future, and interpersonal dysfunction such as perceived social

rejection and isolation (Frank, 1961; Gruenberg, 1967, Schmale & Engel, 1967; Cassell, 1991;

Clark & Kissane, 2002), RCd scores should reflect individual differences in excessive

reassurance seeking.

Similarly, RCd scores likely reflect negative feedback seeking, a related interpersonal

tendency in which individuals desire others to confirm their negative self-concepts (Evraire &

Dozois, 2011). This phenomenon is based in self-verification theory, which proposes that

individuals desire for others to perceive them as they perceive themselves, even if those self-

perceptions are negative in nature (Swann & Read, 1981). Past research indicates that individuals

who engage in negative feedback seeking are more likely to experience interpersonal rejection

and experience worse interpersonal outcomes (Swann, Wenzlaff, Krull, et al., 1992; Borelli &

Prinstein, 2006). Demoralization is associated with both low self-esteem and negative sense of

self, as well as interpersonal rejection and poor interpersonal outcomes (Frank, 1961; Schmale &

Engel, 1967; Gruenberg, 1967; Cassell, 1991; Clark & Kissane, 2002). Therefore, RCd scores

should also capture individual differences in negative feedback seeking.

The Current Study

In summary, demoralization is a psychological state characterized by pervasive dysphoric, unhappy affect, helplessness, an inability to cope, and general dissatisfaction with life. It has been implicated as a significant construct in both medical and psychological dysfunction (e.g., Frank, 1974; Schmale & Engel, 1967; Cassell, 1991; Clarke & Kissane, 2002). The MMPI-2-RF (Ben-Porath & Tellegen, 2008/2011) is unique amongst other measures of personality and psychopathology as it includes a distinct, separate scale intended to assess demoralization, RCd. Tellegen and colleagues (2003) constructed RCd by selecting items from the original MMPI-2 based on both Watson and Tellegen's (1985) structure of mood, as well as past research from various fields regarding the demoralization construct. Although the validity of RCd scores as measures of general affective discomfort has been well-established in criterion validity studies (Sellbom, Ben-Porath, & Graham, 2006; Arbisi, Sellbom, & Ben-Porath, 2008; Forbey & Ben-Porath, 2008), no previous study has established the construct validity of RCd scores in relation to broader research on demoralization. The current study, therefore, sought to place RCd scores within the larger nomological network (Cronbach & Meehl, 1955) by correlating RCd scores with a series of demoralization-related characteristics, as well as examining the ability of RCd scores to predict these criterion beyond measures of depression and negative affect.

Method

Participants

Participants included 248 college students from a mid-sized mid-western university. To reduce error variance in statistical analyses, participants' data were excluded via a listwise approach if they produced non-content-based or content-based invalid MMPI-2-RF profiles per

recommendations outlined in the MMPI-2-RF Interpretive Manual (Ben-Porath & Tellegen,

2008/2011). Additional information about the MMPI-2-RF Validity scales is available in the

Measures section below. Invalid profiles were defined as having Cannot Say (CNS) scores

greater than or equal to 15, True Response Inconsistency-r (TRIN-r) or Variable Response

Inconsistency-r (VRIN-r) scores of greater than or equal to 80, an Infrequent Response-r (F-r)

score equal to 120, Infrequent Psychopathology Responses-r (Fp-r), Infrequent Somatic

Responses (Fs),or Symptom Validity-r (FBS-r) scale scores greater than or equal to 100, an

Uncommon Virtues-r (L-r) scale score greater than or equal to 80, or an Adjustment Validity (K-

r) scale score greater than or equal to 70. This resulted in the exclusion of 60 profiles (24%) in

total. Chi square analyses indicated that men were more likely to produce invalid profiles ($\chi^2(1)$

$= 5.91, p < .015, \varphi = -.15$, but the effect size was small. In terms of age and race, there were no

statistically significant differences between those with valid and invalid profiles. The final

sample consisted of 188 participants (79 men, 109 women) ranging in age from 18 to 37 ($M =$

19.51; $SD = 1.86$). Of these participants, 162 identified as white, 16 identified as black, and 10

reported another racial/ethnic identity or did not disclose.

For each individual analysis, additional participants were excluded via a pairwise

approach. Namely, participants who failed to complete at 10% or more the items on any

collateral measure were excluded only for those analyses in which the target collateral measure

was included. This resulted in the additional exclusion of up to eight participants. These

exclusions are reflected in the N columns of Tables 1 through 4.

Measures

To establish the convergent validity of RCd scores, they were correlated with a series of

other measures of demoralization, as measures well as of depression and negative affect.

Collateral demoralization measures included the Demoralization Scale-II (DS-II; Robinson et al.,

2016a) and the Subjective Incompetence Scale (SIS; Cockram, Doros, & de Figueiredo, 2009).

Measures of depression included the Depression, Anxiety and Stress Scales – Depression Scale

(DASS DEP; Lovibond & Lovibond, 1993), the trait version of the Positive and Negative Affect

Schedule – Expanded Form – Positive Affect Scale (PANAS-X PA; Watson & Clark, 1994), and

the Low Positive Emotions Scale (RC2) of the MMPI-2-RF (Ben-Porath & Tellegen,

2008/2011). Finally, measures of negative affect included the DASS Anxiety Scale (DASS

ANX; Lovibond & Lovibond, 1993), the PANAS-X Negative Affect Scale (PANAS-X NA;

Watson & Clark, 1994), and the MMPI-2-RF's (Ben-Porath & Tellegen, 2008/2011)

Dysfunctional Negative Emotions Scale (RC7). These measures of depression and negative

affect were also used in this study to establish the discriminant validity of RCd scores.

Descriptive statistics for each of these measures are displayed in Table 1.

Criterion measures were selected based on the helplessness/hopelessness, inefficacy, and

interpersonal dysfunction components identified as core features of the broader demoralization

construct. Measures are organized throughout the method, results, and discussion sections per

these three categories. Measures of helplessness/hopelessness included a computerized version

of Berg's Card Sorting Task (BCST; Grant & Berg, 1948) and the Depressive Attributions

Questionnaire (DAQ; Kleim, Gonzalo, & Ehlers, 2011). Inefficacy-related measures consisted of

the New General Self-Efficacy Scale (NGSE; Chen et al., 2001), the Adult Nowicki-Strickland

Internal/External Scale (ANSIE; Nowicki & Duke, 1974), the Core-Self Evaluations Scale

(CSES; Judge et al., 2003), and the Ego Resiliency Scale (ER89; Block & Kremen, 1996).

Finally, measures of interpersonal dysfunction included the Depressive Interpersonal

Relationships Inventory-Reassurance Seeking Scale (DIRI-RS; Metalsky, Joiner, & Pothoff,

1994), the Threat-Related Reassurance Seeking Scale (TRSS; Cougle et al., 2011), and the

Feedback-Seeking Questionnaire (FSQ; Swann et al., 1992). Descriptive statistics for these

measures are displayed in Tables 2, 3, and 4.

The Minnesota Multiphasic Personality Inventory-2-Restructured Form. The

MMPI-2-RF (Ben-Porath & Tellegen, 2008/2011) is a 338-item, true/false self-report inventory

that assesses personality, psychopathology, and social/behavioral functioning. The MMPI-2-RF

contains 51 total scales including nine Validity scales, three Higher-Order scales, nine

Restructured Clinical (RC) scales, 23 Specific Problem (SP) scales, two Interest scales, and five

scales making up the Personality-Psychopathology-Five (PSY-5; Harkness & McNulty, 1994).

Of particular interest to the current study is RCd. Tellegen and Ben Porath (2008/2011)

demonstrated that RCd scores have good internal consistency (i.e., $\alpha > .80$) across multiple

samples, including those from clinical and non-clinical populations. Extensive evidence of the

validity of RCd scores for assessing affective components of demoralization was provided in the

introduction of this manuscript. In the current sample, RCd scores had good internal consistency

($\alpha = .90$) and were normally distributed (skewness = .70, kurtosis = -.50). Scores on RCd had a

mean value of 8.32 with a standard deviation of 6.33.

Two additional MMPI-2-RF scales, Low Positive Emotions (RC2) and Dysfunctional

Negative Emotions (RC7), were also included as collateral measures of depression and negative

affect, respectively. Scores on RC2 reflect levels of positive emotionality, while scores on RC7

measure the presence of negative affect (Ben-Porath & Tellegen, 2008/2011). The MMPI-2-RF

Technical Manual (Tellegen & Ben-Porath, 2008/2011) provides information supporting the

validity of scores on these scales in multiple contexts. In college student populations, this

includes negative correlations between RC2 scores and measures of engagement and enthusiasm,

as well as positive correlations between RC7 scores and measures of stress reactivity.

Descriptive statistics for these scales are included in Table 1.

Each of the nine MMPI-2-RF validity scales were also used in the current investigation to exclude participants who engaged in non-content-based and content-based invalid responding. Cannot Say (CNS), True Response Inconsistency-r (TRIN-r) and Variable Response Inconsistency-r (VRIN-r) scores reflect non-content-based invalid responding. CNS measures the number of unscorable items, while TRIN-r and VRIN-r measure fixed and random responding, respectively (Ben-Porath, 2012). The remaining six scales detect content-based invalid responding, including four scales designed to detect overreporting and two designed to detect underreporting. In terms of overreporting, Infrequent Responses (F-r) measures overreporting of a wide-range of cognitive, psychological, and somatic symptoms, while Infrequent Psychopathology Responses (Fp-r) measures overreporting of severe psychopathology such as psychotic symptoms (Ben-Porath, 2012). Infrequent Somatic Responses (Fs) reflects overreporting of somatic symptoms, and Symptom Validity (FBS-r) and the Response Bias Scale (RBS) detect overreporting in the contexts of civil litigation and forensic evaluations, respectively. Finally, the two underreporting scales are the Uncommon Virtues (L-r) and Adjustment Validity (K-r) scales. L-r scores reflect denial of minor shortcomings and faults that most people endorse, while K-r scores measure claims of psychological adjustment (Ben-Porath, 2012). The MMPI-2-RF Technical Manual (Tellegen & Ben-Porath 2008/2011) includes information supporting the utility of the MMPI-2-RF's validity scales for detecting the response styles described above.

The Demoralization Scale-II. The DS-II (Robinson et al., 2016a) is a shortened, revised version of the Demoralization Scale (Kissane, Wein, Love, Lee, Kee, & Clarke, 2004). The DS-II contains 16 total items, which can be used to compute both an overall demoralization score and scores on two eight-item subscales, meaning and purpose and distress and coping abilities. Respondents indicate how much or how strongly they have felt in accordance with statements such as, "I feel that I cannot help myself," on a 3-point scale ranging from (0) *Never* to (2) *Often.* Internal consistencies in the validation study were acceptable, with alpha coefficients of .89 for the total demoralization scale scores and .84 and .82 for the meaning and purpose and distress and coping ability subscale scores, respectively (Robinson et al., 2016a). Scores on the DS-II also showed convergent and discriminant validity in a medical patient population as it was associated positively with external measures of psychological symptom burden, depression, and reduced quality of life, and was able to identify patients who had moderate levels of demoralization without comorbid depression (Robinson et al., 2016b).

Subjective Incompetence Scale. The SIS (Cockram, Doros, & de Figueiredo, 2009) assesses an individual's perceived inability to act or express oneself in response to a specific stressor. Respondents indicate how often they have felt or behaved a certain way in response to a stressful situation during the past week on a four-point scale ranging from (0) *None of the Time* to (3) *Most or All of the Time* to 12 total items, including items such as "Were you able to plan and initiate concerted action as well as you thought you could?" and "Did you feel that you were running out of ideas to handle the situation?" Respondents receive both basic SI (SIS Basic; number of items scored other than 0) and severity SI (SIS Severity; sum of all items) scores. In an outpatient sample of individuals with a cancer diagnosis, internal consistency of scores as measured by Cronbach's alpha was .90 (Cockram et al., 2009). Scores on the SIS in the same

sample were positively correlated with scores on scales related to maladaptive coping strategies (e.g., as behavioral disengagement), as well as self-blame and denial, supporting the convergent validity of SIS scores.

The Depression, Anxiety and Stress Scales. The DASS (Lovibond & Lovibond, 1993) is widely used to assess the severity of symptoms of anxiety, depression, and stress. The 42-item inventory comprises three 14-item subscales, the Depression (DEP) scale, the Anxiety (ANX) scale, and the Stress (STR) scale. Respondents report the frequency or severity of their symptoms over the past week on a 4-point scale ranging from *did not apply to me at all* (1) to *applied to me very much, or most of the time* (4). In a nonclinical sample, scores on each of the three subscales demonstrated excellent internal consistency, with Cronbach's alpha scores of .95, .90, and .93 for DEP, ANX, and STR, respectively (Crawford & Henry, 2003). In the same study, scores on all scales demonstrated convergent validity, with scores on the DEP and ANX scales correlating with both the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983), and the Personal Disturbance Scale (sAD; Bedford & Foulds, 1978). Moreover, scores on the DEP scale were significantly negatively correlated with positive affectivity, and the magnitude of this relationship was significantly larger than the associations between positive affect and scores on the ANX and STR scales.

Trait Version of the Positive and Negative Affect Schedule – Expanded Form (PANAS-X). The PANAS-X-Trait (Watson & Clark, 1994) is a 60-item measure that assesses an individuals' distinct emotional states within the overarching dimensions of positive affectivity (PA) and negative affectivity (NA). Participant's respond to items by indicating on a 5-point Likert-type scale ranging from 1 (*Very slightly or Not at all)* to 5 (*Extremely*) the extent to which they have felt a particular feeling or emotion during the past few weeks. Sample items include,

"afraid," "jittery," "irritable," and "distressed" for NA and, "active," "determined," "excited,"

and "proud" for PA. The PANAS-X-Trait contains two higher-order scales, Positive and

Negative Affect, and 11 scales that assess more specific facets of these two affective states,

including Fear, Sadness, Guilt, Shyness, Fatigue, Surprise, Hostility, Joviality, Self-Assurance,

Serenity, and Attentiveness. The current study utilizes the PA and NA scales. These scales have

demonstrated adequate internal consistency in past research in non-clinical and college student

populations, with alphas ranging from .85 to .90 for NA and .83 to .90 for PA (Watson & Clark,

1994. Past research supports the validity of the PANAS-X NA and PA scale scores, including

positive associations between NA and scores reflecting general psychological function and

distress on the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi,

1974) and negative correlations between PA and scores on the BDI (Watson, Clark, & Tellegen,

1988).

Berg's Card Sorting Task. Card sorting tasks are widely used as measures of set-

shifting, a cognitive ability closely linked to cognitive flexibility (for a review of the construct of

cognitive flexibility and tasks used to assess it see Ionescu, 2012). These tasks require

respondents to match a series of stimulus cards to category cards that vary by shape, color, and

number. Participants discern the initial sorting rule via trial and error based on feedback received

after each individual sort. Following a number of consecutive correct answers, the sorting rule

shifts without warning, requiring respondents to shift from an old rule to a new one. The main

outcome of card sorting tasks typically used to measure cognitive flexibility is the occurrence of

perseverative errors, defined as the number or percentage of repetitive errors in accordance with

the old rule despite initiation of a new rule (Tchanturia et al., 2012). The current study used

Berg's Card Sorting Task (BCST), a version the Wisconsin Card Sorting Test (Grant & Berg, 1948) provided by the Psychology Experiment Building Language (PEBL).

The Depressive Attributions Questionnaire. The DAQ (Kleim, Gonzalo, & Ehlers, 2011) is a 16-item measure that assesses depressogenic attributions, namely negative stable, internal, and global attributions. Respondents rate their agreement with each item (e.g., "Bad things always happen to me," and "When something I do goes wrong, I think it is because I am incapable.") on a five-point Likert-type scale ranging from (0) *Not At All* to (4) *Very Strongly*. The DAQ contains four four-item attribution domain subscales assessing stable (DAQ Stable), internal (DAQ Internal), and global (DAQ Global) attributions of negative life events, as well as a perceived helplessness (DAQ PH). Internal consistencies for total scores on the DAQ were excellent in past studies using clinical populations, ranging from $\alpha = .94$ to .97 (Kleim et al., 2011). Scores also showed adequate convergent and discriminant validity in initial studies, demonstrating positive associations with measures such as the negative event subscale of the Attribution Style Questionnaire (ASQ; Peterson et al., 1982), as well as the ability to discriminate between respondents with and without diagnoses of major depressive disorder (Kleim et al., 2011).

The New General Self-Efficacy Scale. The NGSE (Chen et al., 2001) is a unidimensional measure of general self-efficacy. The NGSE comprises eight items, including "I am confident that I can perform effectively on many different tasks," and "I general, I think that I can obtain outcomes that are important to me." Respondents rate their agreement to each item on a five-point Likert-type scale ranging from (1) *Strongly Disagree* to (5) *Strongly Agree*. Scores on the NGSE have demonstrated good internal consistency in undergraduate student populations, with alphas ranging from .85 to .90 (Chen et al., 2001). Further, in an undergraduate student

population, scores have been positively correlated with other measures of specific self-efficacy,

and were demonstrated to be related, but sufficiently distinct, from measures of self-esteem

(Chen et al., 2001).

The Adult Nowicki-Strickland Internal-External Scale. The ANSIE (Nowicki &

Duke, 1974) is a 40-item measure assessing locus of control designed for use in adult college and

non-college populations. Respondents indicate their agreement to items such as "Are some

people just born lucky?" and, "Do you think that people can get their own way if they just keep

trying?" by selecting *Yes* or *No.* Scores on the ANSIE have demonstrated acceptable reliability,

with split-half reliability estimates ranging from .74 to .86 (Nowicki & Duke, 1974). Further,

Nowicki & Duke (1974) found evidence for the convergent validity of scores on the ANIES in

college populations, as scores were positively correlated with scores on the Rotter Internal-

External Locus of Control Scale (Rotter, 1966).

The Core Self-Evaluation Scale. The CSES (Judge et al., 2003) is a 12-item

unidimensional measure that reflects core self-evaluation, a higher-order latent trait underlying

self-esteem, generalized self-efficacy, neuroticism, and locus of control. More specifically, the

CSES assesses the basic, fundamental judgments an individual makes about his or her

effectiveness, worthiness, and capability (Judge et al., 2003). Respondents indicate their level of

agreement to each item (e.g., "I am filled with doubts about my competence," and "I am

confident I get the success I deserve in life.") on a five-point Likert-type scale ranging from (1)

Strongly Disagree to (5) *Strongly Agree.* In the initial validation study, internal consistency

estimates in undergraduate student populations ranged from $\alpha = .81$ to .87 (Judge et al., 2003).

Scores on the CSES have also been positively correlated with the four core self-evaluative traits

in undergraduate samples, supporting their convergent validity (Judge et al., 2003). Moreover,

scores on the CSES were significantly predictive of job satisfaction and performance in

employment samples and life satisfaction in undergraduate student populations (Judge et al.,

2003). In terms of discriminant validity, scores on the CSES in undergraduate samples diverge

from scores on measures of conscientiousness, extraversion, agreeableness, and openness, traits

theoretically posited to be significantly related to, but sufficiently distinct from, CSE (Judge et

al., 2003).

The Ego-Resiliency Scale. The ER89 (Block & Kremen, 1996) comprises 14 total items

which assesses individual differences in ego-resiliency. Respondents indicate their level of

agreement to each item on a four-point scale ranging from (1) *Disagree Very Strongly* to (4)

Agree Very Strongly. Sample items include "My daily life is full of things that keep me

interested," and "I quickly get over and recover from being started." In past studies, estimates of

internal consistency have been acceptable, with Cronbach's alpha levels estimated at .72 and .76

in a college student population and an 18- and 23-year-old non-college population, respectively

(Block & Kremen, 1996; Letzring et al., 2004). Scores on the ER89 have demonstrated positive

relationships with measures of related constructs such as social skills, social poise, high

aspiration levels, being cheerful, assertive, and expressive, and valuing intellectual matters

(Letzring et al., 2004). Additionally, scores on the ER89 were empirically distinct in a college

student population from intelligence as measured by SAT/ACT scores (Letzring et al., 2004).

The Depressive Interpersonal Relationships Inventory-Reassurance Seeking

Subscale. The DIRI (Metalsky, Joiner, & Pothoff, 1994) is a 24-item measure assessing

interpersonal styles related to depression, including doubting the sincerity of others, reassurance

seeking, approval seeking, and dependency. Of particular interest to this study is the 4-item

Reassurance Seeking Subscale, which reflects an individual's tendency to excessively and

habitually seek reassurance from others. Participants respond to items such as, "Do you

frequently seek reassurance from the people you feel close to as to whether they really care about

you?" and "Do the people you feel close to get 'fed up' with you for seeking reassurance from

them about whether they really care about you?" on a seven-point Likert-type scale ranging from

(1) *No, Not At All,* to (7) *Yes, Very Much.* Scores on the DIRI-RS have demonstrated good

reliability in an undergraduate population with α = .88 (Joiner & Metalsky, 2001). Moreover, in

the same study, scores on the DIRI-RS were positively correlated with judge's subjective and

behavioral ratings of reassurance seeking, supporting the convergent validity of scores in this

population.

The Threat-Related Reassurance Seeking Scale. The TRSS (Cougle et al., 2011) is an

8-item self-report inventory that reflects reassurance seeking behaviors related to evaluative and

general threats. The TRSS is multidimensional and comprises two factors: general and evaluative

threat-related reassurance seeking. Respondents provide answers to each question (e.g., "Do you

find yourself often asking others whether everything will be alright?" and "Do you need

reassurance from others that there is nothing wrong with you [for example, your appearance,

behavior, personality, or intelligence]?) on a seven-point Likert-type scale ranging from (1) *No,*

Not At All to (7) *Yes, Very Much.* In past studies using undergraduate student samples, scores on

the TRSS have demonstrated good internal consistency for the total scale (α = .93), as well as for

each factor (α = .93 for evaluative threat and α = .89 for general threat) (Cougle et al., 2011). In

the same study, scores on the TRSS were significantly positively correlated with scores on the

DIRI-RS, as well as measures of OCD and GAD symptoms, trait anxiety, and depression,

indicating good convergent validity.

The Feedback-Seeking Questionnaire. The FSQ (Swann et al., 1992) assesses an individual's feedback-seeking tendencies within five broad domains: sociability, intellect, music/artistry, physical attractiveness, and athletic ability. For each category, respondents are presented with six total questions and asked to select which two questions they would prefer to have another person answer about them. Within each domain, three questions are positively framed (e.g., "What about the participant makes you think he/she would be confident in social situations?") and three are negative framed (e.g., "Why might the participant have little confidence in his/her appearance?"). A negative feedback seeking score is calculated by summing the number of negative questions selected, where higher scores indicate stronger preferences for negative evaluation. The FSQ was originally worded such that respondents selected questions they would like their roommates to answer. The present study modified the measure to assess feedback seeking preferences in regards to friends rather than roommates. Joiner, Alfano, and Metalsky (1993) reported that coefficient alpha for the FSQ in an undergraduate sample was .63, but noted that this may not be the most appropriate index of reliability given that the FSQ assesses five content domains. While criterion validity information was unavailable at the time of this study, past studies support the construct validity of the FSQ. This includes demonstrations of associations between scores on the FSQ and measures of related constructs including roommate alienation and rejection (Joiner et al., 1993; Swann et al., 1992).

Procedure

All procedures were approved by the Institutional Review Board, and participants were provided information for informed consent before commencement of the study. Participants signed up to complete the study via an online registration system. Once they arrived at their scheduled sessions, participants completed a computerized version of Berg's Card Sorting Task,

followed by computerized versions of the MMPI-2 and collateral measures during a single in-person laboratory session lasting approximately two hours in groups of up to four participants. Administration of the MMPI-2 and collateral measures was counterbalanced, with collateral measures presented in a randomized fashion. All sessions were supervised by trained graduate and undergraduate research assistants. In exchange for their participation, participants received research credit toward their courses.

Data Analysis

To examine the convergent validity of RCd scores, I computed Pearson's product moment correlations between scores on RCd and other measures of demoralization, as well as measures of similar constructs within demoralization's nomological net. I computed additional product moment correlations between scores on RCd scores and each criterion measure within the helplessness/hopelessness, inefficacy, and interpersonal functioning categories. Due to the large number of correlations calculated, I used a conservative alpha level of .001 to determine statistical significance for all correlations. Finally, correlations were characterized per effect sizes guidelines outlined by Cohen (1988), and correlations that achieved at least a medium effect size ($r \geq .30$) were emphasized as being practically meaningful.

I then completed a series of hierarchical regression analyses to investigate the discriminant validity of RCd scores in comparison to similar constructs, depression and negative affect. Depression was operationalized using scores from the DASS DEP scale, as well as two scales assessing low positive emotionality, the PANAS-X PA and MMPI-2-RF RC2 scales. I selected these measures as comparison measures for depression because anhedonia (or low positive emotionality) has been identified as a feature of depression that specifically differentiates it from demoralization (Joiner et al., 2003; Sellbom, et al., 2008). For comparison

measures of negative affect, I used the DASS ANX scale, the PANAS-X NA scale, and the

MMPI-2-RF RC7 scale. The DASS ANX scale includes items primarily related to physiological

hyperarousal and experiences of anxious affect, whereas the DASS STR scales reflects non-

specific features of depression and anxiety such as nervousness, difficulty relaxing, irritability,

and agitation (Lovibond & Lovibond, 1995). Because of the non-specific nature of the STR

scale, I chose the ANX scale as a comparison measure of negative affect as it allows examination

of explained variance unique to negative affect. I computed a model using only the depression or

NA comparison scale score as a predictor in step one, then added RCd as a predictor to the

model in step two. Doing so allowed me to examine whether scores on RCd added incrementally

to the prediction of outcomes beyond these comparison measures. I then reversed this procedure,

entering RCd as the sole predictor in step one and the comparison measures in step two. Results

from the second set of regression analyses allowed me to examine whether scores on these

comparison measures would predict additional variance beyond RCd scores. By rationally

contrasting results from the first and second regression analyses, I was able to determine whether

RCd scores outperformed measures of depression and negative affect in predicting each

outcome.

Across all calculated regressions, R^2 values and changes in R^2 values were characterized

per Cohen's guidelines (i.e., $R^2 \geq .02$ = small, $R^2 \geq .13$ = medium, $R^2 \geq .26$ = large; Cohen, 1988).

Changes in Standardized Regression Coefficients (β values) were interpreted only to aid in

determining which individual predictors were driving the association in models containing

multiple predictor variables. Specifically, I rationally compared β values for RCd and

comparison measure scores when added in step two to determine which scale was the primary

predictor. Due to the large number of analyses, I also used a conservative alpha value of .001 to

test statistical significance of the overall model fit statistics, model change statistics, and *t*-tests of unstandardized regression coefficients.

Results

Correlational Analyses

Descriptive statistics for each correlational analysis are displayed in Tables 1-4. An examination of scatterplots and descriptive statistics indicated that the assumptions were met for this statistical procedure for scores on all included measures, except for DASS DEP scores. For DASS DEP scores, skewness and kurtosis indicated deviation from normality, but an examination of the scatterplot indicated the association with RCd scores was linear. As such, Pearson's correlations were determined to be the most appropriate measure of association to use for all correlational analyses.

Pearson's *r* values for each convergent validity measures' association with RCd scores are depicted in Table 1. As seen in Table 1, RCd scores had large positive correlations with DS-II total and subscale scores. Correlations between scores on RCd and the SIS, both SIS Basic and SIS Severity, were also statistically significant and positive, but were of only a medium effect size. Scores on RCd also had large positive correlations with DASS DEP and RC2 scores, as well as a medium negative correlation with the PANAS-X PA scale. Finally, RCd scores were positively correlated at a large effect size with each of the measures of negative affect, including scores from the PANAS-X NA, DASS ANX, and RC7 scales.

Associations between scores on RCd and each criterion measure selected to measure the larger demoralization nomological net are included in Tables 2, 3, and 4. Table 2 displays these associations for the helplessness/hopelessness criterion measures. As seen in this table, I found no statistically significant correlation between RCd scores and perseverative errors on BCST.

However, there were large positive correlations between scores on RCd and DAQ total scores, as well scores on each of the DAQ attribution domain subscales.

Table 3 provides results for the inefficacy criterion measures. As depicted in this table, RCd scores had statistically significant associations with each of the measures reflecting the four constructs in this category. Namely, RCd scores were negatively correlated with scores on the NGSE and CSES, as well as negatively correlated with ANSIE scores, at large effect sizes. Scores on RCd were also negatively associated with scores on the ERS, but at only a medium effect size.

Finally, associations between scores on RCd and criterion measures related to interpersonal dysfunction are depicted in Table 4. Inspection of these results indicated that RCd scores were statistically significantly associated with measures related to excessive reassurance seeking, but not negative feedback seeking. Specifically, RCd scores had large positive associations with scores on the DIRI-RS, TRSS Evaluative Threat, and TRSS General Threat scales. There was no statistically significant association between scores on RCd and the FSQ.

Hierarchical Regression Analyses

Hierarchical regressions demonstrating the predictive ability of scores on RCd in comparison to scores from measures that assess depression and negative affectivity are depicted in Tables 5 through 16. Each of these tables includes both model fit and change statistics, β values, and significance of unstandardized coefficients. Only those criterion scales whose scores demonstrated at least a medium correlation with RCd scores were included in these analyses. In each table, depression comparison measures are organized in the upper half of the table, while comparison measures of negative affect are organized in the lower half. An examination of

histograms depicting the residuals from these regression models indicated that ordinary least squares regression was appropriate for these analyses.

For helplessness/hopelessness criterion, I examined the ability of scores on RCd to predict DAQ total scores, as well as each attribution domain subscale score, beyond measures of depression and negative affect. As seen in Table 5, scores on RCd predicted additional variance in DAQ total scores beyond the measures of depression and negative affect. Specifically, adding RCd to models containing only PANAS-X PA and RC2 scores added a large amount of explained variance. Scores on RCd, however, added only a small amount to prediction beyond DASS DEP scores. For measures of negative affect, adding RCd scores accounted for a moderate amount of additional variance when added to models containing only DASS ANX, PANAS-X NA, and RC7 scores. Conversely, entering each of the depression and NA comparison measures into models containing only RCd scores did not result in any statistically significant changes in variance explained in DAQ total scores.

This pattern of results was similar across DAQ attribution domain subscale scores, which includes internal (Table 6), stable (Table 7), and global (Table 8) attributions regarding negative life events, as well as perceived helplessness in response to stressors (Table 8). Across each domain, RCd scores accounted for significant additional explained variance when added to models containing only measures of depression or negative affect. The amount of additional variance explained by RCd scores was typically medium or large, but with some exceptions. Namely, adding RCd scores to models containing DASS DEP or RC7 scores only increased R^2 values a small amount across all attribution domains. Conversely, adding measures of depression and negative affect to models containing only RCd scores did not add statistically significant amounts of explained variance across attribution domains. The one exception was adding DASS

DEP scores to a model predicting scores on DAQ Stable, as depicted in Table 7. The added variance was small (i.e., $\Delta R^2 = .04$), and further inspection of the β values indicated that DASS DEP and RCd scores predicted DAQ Stable scores relatively equally ($\beta = .36$ for RCd scores when added to DASS DEP scores and .34 when adding DASS DEP scores to RCd scores).

For inefficacy criterion, which included general self-efficacy, external locus of control, core self-evaluation, and ego resiliency, there was a more inconsistent pattern of results. Results for the NGSE are displayed in Table 10. For this criterion, models examining discrimination from depression indicated that RCd scores added a medium amount of variance to a model containing PANAS-X PA scores and a small amount to models containing DASS DEP and RC2 scores. For measures of negative affect, RCd scores accounted for additional variance when added to each measure, including medium effect size changes in R^2 values over PANAS-X NA and DASS ANX scores, and a smell effect size change in R^2 values over RC7 scores. Conversely, none of the collateral measures significantly added variance beyond RCd in predicting NGSE scores. The two exceptions to this were PANAS-X PA and RC2 scores, which added medium and small amounts of variance, respectively. Inspection of β values suggested that RCd and PANAS-X PA scores each predicted NGSE scores equally well ($\beta = -.42$ for RCd scores when added to PANAS-X PA scores and .41 when adding PANAS-X PA scores to RCd scores). Scores on RCd, however, seemed to slightly outperform RC2 scores when predicting NGSE scores because RCd scores had a β of .41 when added to RC2 scores, whereas RC2 had a β of -.28 when added to RCd scores.

Results for prediction of ANSIE scores are depicted in Table 11. This pattern of results was more consistent, with RCd scores adding significantly to explained variance over comparison measures of both depression and negative affect. These effects were large for DASS

ANX, medium for PANAS-X PA, RC2, and PANAS-X NA, and small for DASS DEP, and

RC7. Conversely, when order of entry was reversed, collateral measures of depression and

negative affect did not account for significant additional variance beyond scores on RCd.

Results for CSES scores, displayed in Table 12, were similar to those for ANSIE scores.

Specifically, RCd scores explained a large amount of additional variance in CSES scores when

added to PANAS-X PA, RC2, DASS ANX, and RC7 scores, a medium amount of additional

variance when added to DASS DEP scores, and a small amount when added to PANAS-X PA

scores. Conversely, addition of collateral measures of depression and negative affect to models

containing RCd did not account for a significant amount of additional variance in the outcome.

The one exception was when adding PANAS-X PA and RC2 scores. In both cases, however,

additional variance explained was small (ΔR^2 = .06 for PANAS-X PA and .04 for RC2).

Additionally, examination of β values for these models indicated that RCd scores were the

strongest predictors of CSES scores in both cases. Scores on RCd had a β of -.65 when added to

PANAS-X PA and RC2 scores compared to .27 when adding PANAS-X PA scores and -.24

when adding RC2 scores to RCd scores.

Results for prediction of ER89 scores are depicted in Table 13. When predicting ER89

scores, RCd scores only accounted for additional variance when entered with PANAS-X NA

scores, and the amount of additional explained variance was small. Conversely, both PANAS-X

PA and RC2 scores accounted for additional variance when added to models containing RCd,

explaining an additional large and small amount of variance, respectively. An inspection of β

values for models containing PANAS-X PA scores indicated that PANAS-X PA scores

outperformed RCd scores in prediction of ER89 scores, as PANAS-X PA scores had a β of .41

when added to RCd scores, whereas RCd scores had a β of only -.17 when added to PANAS-X

PA scores. Similarly, β values for models containing RC2 indicated that RC2 scores were better predictors of ER89 scores than RCd scores. This is because RC2 scores had a β of -.42 when added to RCd scores, but RCd scores had a non-significant β when added to RC2 scores.

Finally, results for criterion measures related to interpersonal dysfunction are displayed in Tables 14 through16. This category of measures included excessive reassurance seeking as assessed by the DIRI-RS and TRSS General Threat and Evaluate Threat Scales. Results for prediction of DIRI-RS scores are depicted in Table 14. Adding RCd scores to models containing measures of depression added a small amount of variance for DASS DEP and RC2 scores and a medium amount of variance for PANAS-X PA scores. In terms of measures of negative affect, the addition of RCd scores explained an additional small amount of variance when added to DASS ANX and PANAS-NA scores. Conversely, none of the comparison measures of depression or negative affect added significant variance beyond RCd scores.

Results were similar for both prediction of TRSS General Threat and Evaluative Threat scores. As depicted in Table 15, adding RCd scores to models containing DASS DEP, DASS ANX, and PANAS-X NA scores explained a small amount of additional variance in prediction of TRSS General Threat Scale scores, and a medium amount of additional variance to models containing PANAS-X PA and RC2 scores. For TRSS Evaluative Threat Scale scores (Table 16), RCd scores added a small amount of variance to DASS ANX and PANAS-X NA scores, a medium amount to DASS DEP and RC2 scores, and a large amount to PANAS-X PA scores. Conversely, adding measures of depression and negative affect did not account for significant additional variance beyond RCd scores in predicting either TRSS General Threat Scale or TRSS Evaluative Threat Scale scores.

Discussion

The current study sought to place RCd scores within demoralization's broader nomological net by examining their associations with a series of demoralization-related characteristics and investigating its ability to predict these characteristics beyond two similar constructs, depression and negative affect. Overall, results supported my hypotheses regarding association between RCd scores and measures selected to assess convergent validity. Specifically, when scores on RCd were associated with other measures of demoralization, depression, and, negative affect, results indicated RCd scores demonstrated excellent convergent validity. Scores on this scale had large associations in the expected directions with all measures. Exceptions to this pattern of association included those with scores on SIS Basic and SIS Severity, where RCd scores demonstrated medium positive associations with these scales. These weaker associations are consistent with the conceptualization of demoralization as a combination of subjective incompetence and distress, such that demoralization results when the two co-occur (de Figeiredo & Frank, 1982). The associations of scores on RCd with PANAS-X PA and NA scores also further corroborate Watson and Tellegen's (1985) structure of mood, as RCd scores had a strong positive correlation with NA scores and a somewhat weaker negative correlation with PA scores.

In terms of criterion, which included constructs associated with helplessness/hopelessness, inefficacy, and interpersonal dysfunction, RCd scores were strongly associated with most of the selected measures in the expected directions. In the helplessness/hopelessness category, results supported my hypotheses about pessimistic attribution styles, but not those related to cognitive rigidity. The positive association between

RCd scores and pessimistic attribution styles remained consistent across all DAQ attribution domains. As such, test-takers with high scores on RCd likely attribute negative life events to stable, internal, and global causes. They also tend to perceive themselves as helpless in response to life stressors. Scores on RCd were the strongest predictors of these attribution styles when compared to measures of both depression and negative affect, suggesting RCd scores also have good discriminant validity when predicting pessimistic attributions. The exception to this finding was prediction of DAQ Stable scores, where DASS DEP scores predicted these scores equally as well as RCd scores.

Results failed to support an association between RCd scores and cognitive rigidity as assessed by the BCST. However, this may be a result of my operationalization of the construct rather than a true lack of association. Research suggests that neuropsychological tests such as the BCST can lack validity due to factors such as the testing environment, debate over the underlying constructs being measured, and the small sample of behavior observed (Chaytor & Schmitter-Edgecombe, 2003). In the current study, the BCST may have lacked sufficient sensitivity for detecting cognitive rigidity in the laboratory testing environment, or the construct may be best reflected by an alternative laboratory task (see Ionescu 2012 for a listing of alternatives). Thus, future studies might operationalize cognitive rigidity using a different task (e.g., the Operational Shift Task [Kendler, 1964] or Stroop test) or administer tasks under different testing conditions. Similarly, future studies should investigate whether there are condition-specific behavioral associations of demoralization by using behavioral tasks of frustration tolerance. This would allow examination of whether test-takers with high RCd scores demonstrate less resiliency when placed under stressful conditions. Beyond the BCST, the current study was limited by its use of primarily self-report instruments, which resulted in

inflated correlations due to shared method variance. Thus, future investigations should include additional methods such as alternative laboratory tasks, collateral informant ratings, and behavioral observation scale.

For inefficacy-related criterion, results of correlational analyses were each consistent with my hypothesis. Namely, results suggested RCd scores had associations with low general self-efficacy, a belief in external sources of reinforcement, poor core self-evaluations, and low ego resiliency. These findings indicate that test-takers with high RCd scores tend to judge themselves as inefficacious across a wide-variety of situations, attribute positive outcomes to external sources of control such as luck or fate, fundamentally appraise themselves as being generally unworthy and inadequate, and tend to perseverate and become disorganized when faced with stress rather than adapt effectively. Hierarchical regression analyses indicated that RCd scores were the overall best predictors of core self-evaluation and external locus of control when compared to selected measures of depression and negative affect, suggesting RCd scores have good discriminant validity when predicting these outcomes.

However, results of the hierarchical regression analyses indicated that RCd scores lacked discriminant validity in the prediction of general self-efficacy and ego resiliency, despite the observed correlations between these measures and RCd scores being in the expected direction. Specifically, for general self-efficacy, PANAS-X PA scores predicted this criterion measure equally as well as RCd scores, and RC2 scores accounted for significant additional variance in NGSE scores beyond RCd scores. While these results support my hypotheses in that RCd scores were negatively correlated with NGSE scores, they unexpectedly suggest utility for measures of positive affect in adding to the prediction of these outcomes, as well. However, the unexpected utility of positive emotionality in predicting general self-efficacy is consistent with the

conceptualization of general self-efficacy as a motivational construct (Brockner, 1988; Gardner & Pierce, 1988) that is associated with motivational traits such as conscientiousness and need for achievement (Chen, Gully, & Eden, 2000). Individuals high in general self-efficacy feel motivated and capable of meeting life's demands (Chen et al., 2001). Positive Affect, as assessed by the PANAS-X, is characterized by engagement and enthusiasm and includes items such as "determined," "inspired," and "interested." Similarly, RC2 includes items related to diminished energy and enthusiasm, and scores on RC2 have demonstrated associations with loss of interest (Arbisi et al., 2008). As such, findings that scores on these scales add to prediction of general self-efficacy beyond RCd scores makes conceptual sense given positive emotionality's connection to engagement and motivation.

Contrary to my hypothesis, scores on RCd also lacked discriminant validity in prediction of ego resiliency, where scores on both the PANAS-X PA and RC2 scales outperformed RCd scores. This unexpected finding may result from a buffering effect of positive emotions that bolsters psychological resiliency. According to the broaden-and-build theory (Frederickson, 1998), experiences of positive emotions help to broaden the scope of an individual's available thoughts and actions when faced with stress. These broadened mindsets help to build the individual's social, psychological, and cognitive resources, aiding them in successfully regulating negative emotional states (Tugade & Frederickson, 2004). Thus, per this theory, positive emotions act as buffers against stress, resulting in increased psychological resilience (Tugade & Frederickson, 2004). This framework may explain why both PANAS-X PA and RC2 scores outperformed RCd scores in the prediction of ego resiliency. Specifically, individuals with higher levels of positive emotionality may be better equipped to adapt to stressors because their experiences of positive emotions could result in both a greater number of cognitive and

behavioral options when faced with stress, as well as strengthened psychological, social, and cognitive resources, when compared to those with lower levels of positive affect. Practically, this finding suggests clinicians should consider a test-taker's tendency toward or lack of positive affect more heavily than demoralization when determining their levels of ego resiliency.

In terms of interpersonal functioning criterion, results for excessive reassurance seeking were consistent with my hypotheses. Specifically, RCd scores had strong positive associations with excessive reassurance seeking, including reassurance seeking about general and evaluative threats. As hypothesized, scores on RCd were also the strongest predictors of these outcomes when compared to measures of depression and negative affect. This pattern of results indicates that high RCd scores are associated with an interpersonal style characterized by excessive attempts to negotiate doubts about one's lovability and worthiness, whether negative outcomes will occur, and whether they will be evaluated negatively. However, RCd scores were not associated with negative feedback seeking as hypothesized. Given the association between depression and negative feedback seeking behaviors in past studies (see Evaire & Dozois, 2011), I conducted post-hoc correlational analysis to determine if FSQ scores were associated with measures of depression in the current sample. Results of these analyses included statistically significant associations between FSQ scores and both PANAS-X PA ($r = -.246$, $p = .001$) and RC2 ($r = .177$, $p = .018$), scores. This differential pattern of association may suggest demoralized individuals may seek to negotiate doubts and negative self-concepts, while individuals with depression may tend to seek to elicit negative feedback that confirms their negative self-perceptions. These findings also corroborate past research suggesting negative feedback seeking maybe an interpersonal strategy that differentiates depression from similar conditions. Namely, results from Pettit and Joiner (2001) suggested that negative feedback seeking behaviors and

personal failure predicted increased depressive symptoms at follow-up, but not anxiety symptoms. Future investigations should continue to investigate the specificity of negative feedback seeking to depression, as well as continue examination of the associations between RCd scores and interpersonal functioning. It may be particularly interesting to gather collateral information about interpersonal functioning from friends or family members to determine if the excessive reassurance seeking behaviors exhibited by those with high RCd scores have additional social consequences.

Across hierarchical regression analyses, RCd scores added a non-significant or only a small amount of variance to DASS DEP scores in the prediction of all criterion measures except CSES and TRSS Evaluative Threat scores. Given Tellegen's (1985) hypothesis that demoralization saturates measures of affective dysfunction, I examined associations between this scale and other measures of demoralization. These post-hoc analyses indicated that DASS DEP scores had significant associations with collateral measures of demoralization, including large correlations with DS-II Total ($r = .86$, $p < .001$, $N = 188$) and SIS Severity scores ($r = .55$, $p < .001$, $N = 185$), as well as a moderate correlation with SIS Basic scores ($r = .44$, $p < .001$, $N = 185$). Fishers r-to-z tests demonstrate that these correlations are not significantly different than the correlations between scores on these measures and RCd scores ($z = .1.01$, $p = .31$ for DS-II Total, $z = .1.03$, $p = .30$ for SIS Severity, $z = -.12$, $p = .90$ for SIS Basic; See Table 1 for associations between RCd scores and scores on these measures). These findings indicate that DASS DEP is saturated with non-specific demoralization variability and is, thus, not likely to be a pure measure of depression. As such, future studies should use an alternative measure of depression that emphasizes the anhedonic features that differentiate it from similar conditions.

This study had several other methodological limitations, in addition to those posed by the BCST and DASS DEP measures. First, the sample consisted primarily of white, female college students. Additionally, although some forms of psychopathology are prevalent amongst college students (i.e., unipolar mood and anxiety pathology; Pedrelli, Nyer, Yeung, Zulaf, & Wilens, 2015), low base rate and more severe conditions (i.e., schizophrenia) were likely underrepresented in this sample. Given these considerations, these results may not generalize to other demographic populations or to demoralization as it experienced in low base rate or severe psychopathological conditions. Despite these sampling limitations, the current sample likely had sufficient variability in the selected criterion variables, as college is a developmentally challenging period during which many students may experience stressors that result in increased inefficaciousness, hopelessness, and social dysfunction (Conley, Kirsh, Dickson, & Bryant, 2014). Future studies should determine whether these results generalize to other populations, particularly clinical populations where higher levels of demoralization would be expected and where lower-base rate psychopathology would be more prevalent.

Finally, all measures in this study were completed at a single time point, allowing only a snapshot of the test-takers' functioning. Future studies should examine the temporal stability of RCd to determine whether scores fluctuate over time. This research might be particularly interesting if combined with psychotherapy because this would allow for examination of Frank's (1961) demoralization hypothesis, which posits that demoralization is alleviated by psychotherapy. Future studies might also use ecological momentary assessment (EMA) or other experiencing sampling techniques to examine intraindividual variation in demoralization within subjects and gather more ecologically valid data about the functioning of demoralized test-takers over multiple time points. These types of investigations would both enhance the clinical utility of

RCd scores, as well as provide a greater understanding of the way demoralization may fluctuate within individuals across time.

Despite these limitations and need for future investigation, the current study adds meaningfully to our current understanding of the MMPI-2-RF's RCd scale. It corroborates findings from past research supporting the validity of RCd scores as measures of affective discomfort, as well as suggests additional interpretations of RCd scores that provide more nuanced information about how demoralized test-takers evaluate themselves, interact with others, and view their environments and life circumstances. In terms of helplessness/hopelessness, these results demonstrate that RCd scores reflect pervasive pessimistic attributions that are stable and internal, and that scores on RCd outperform measures of depression and negative affect in prediction of these attributions. Further, results from inefficacy-related criterion analyses indicated high RCd scores reflect a general sense of inefficaciousness that persists across contexts, a belief that reinforcements result from external factors, negative fundamental self-appraisals, and a tendency to become disorganized and perseverate under stress rather than adapt appropriately. With the exception of for general self-efficacy and ego resiliency, scores on RCd were the primary predictor of these criterion. Finally, this study suggests novel interpretations for RCd scores about the test-taker's interpersonal style, including those related to excessively seeking reassurance about general and evaluative threats.

References

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-

     based subtype of depression. *Psychological Review, 96,* 358-372.

Ahrens, A. H., & Haaga, D. A. (1993). The specificity of attributional style and expectations to

     positive and negative affectivity, depression, and anxiety. Cognitive Therapy and

     Research, 17(1), 83-98. doi:10.1007/bf01172742

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders*

     (4th ed.). Washington, DC: Author.

Arbisi, P. A., Sellbom, M., & Ben-Porath, Y. S. (2008). Empirical correlates of the MMPI-2

     Restructured Clinical (RC) scales in psychiatric inpatients. *Journal of Personality*

     Assessment, 90(2), 122-128. doi:10.1080/00223890701845146

Bandura, A. *Social learning theory.* Englewood Cliffs, N. J.: Prentice-Hall.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II.*

     San Antonio, TX: Psychological Corporation.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J. E., & Erbaugh, J. K. (1961). An inventory

     for measuring depression. *Archives of General Psychiatry, 4*, 561-571.

Ben-Porath, Y. S. (2012). *Interpreting the MMPI-2-RF.* Minneapolis, MN: University of

     Minnesota Press.

Ben-Porath Y. S. & Tellegen, A. (2008/2011). *MMPI-2-RF (Minnesota Multiphasic Personality*

     Inventory-2 Restructured Form) manual for administration, scoring, and interpretation.

     Minneapolis: University of Minnesota Press.

Block, J. H., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of

    behavior. In W. A. Collins (Ed.), *Minnesota Symposia on Child Psychology* (Vol. 13 pp.

    39-101). Hillsdale, NJ: Earlbaum.

Block, J. & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections

    and separateness. *Journal of Personality and Social Psychology, 70,* 349-361.

Borelli, J. L., & Prinstein, M. J. (2006). Reciprocal, longitudinal associations between

    adolescents' negative feedback-seeking, depressive symptoms, and friendship

    perceptions. *Journal of Abnormal Child Psychology, 34,* 159-169.

Brocker, J. (1988). *Self-esteem at work: Research, theory, and practice.* Lexington, MA:

    Lexington Books.

Burns, M. O., & Seligman, M. E. P. (1991). Explanatory style, helplessness, and depression. In

    C. R. Snyder & D. R. Forsyth (Eds.), Handbook of social and clinical psychology: The

    health perspective (pp. 267-284). Elmsford, NY: Pergamon Press.

Camara, W. J., Nathan, J. S., & Puente, A. E. (2000). Psychological test usage: Implications in

    professional psychology. *Professional Psychology: Research and Practice, 31*(2), 141-

    154. doi:10.1037//0735-7028.31.2.141

Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the

    multitrait-multimethod matrix. *Psychological Bulletin, 56*(2), 81-105.

Cassell, E. J. (1991). Recognizing suffering. *The Hastings Center Report, 21*(3), 24-31.

Chaytor, N., & Schmitter-Edgecombe, M. (2003). The ecological validity of neuropsychological

    test: A review of the literature one everyday cognitive skills. *Neuropsychologicy Review,*

    13(4), 181-197.

Chen, G., Gully, S., & Eden, D. (2000, August). *General self-efficacy and self-esteem are distinguishable constructs.* Paper presented at the 60th Annual Meeting of the Academy of Management, Toronto.

Chen, G., Gully, S., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*(1), 62-83. doi:10.1177/109442810141004

Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology,* 100, 316-336.

Clarke, D. M., & Kissane, D. W. (2002). Demoralization: Its phenomenology and importance. *Australian and New Zealand Journal of Psychiatry, 36,* 733-742.

Clarke, D. M., Mackinnon, A. J., Smith, G. C., McKenzie, D. P., & Herrman, H. E. (2000). Dimensions of psychopathology in the medically ill. A latent trait analysis. *Psychosomatics, 41,* 418-425.

Clarke, D. M., Smith, G. C., Dowe, D. L., & McKenzie, D. P. (2003). An empirically-derived taxonomy of common distress syndromes in the medically ill. *Journal of Psychosomatic Research, 54,* 323-330.

Cockram, C. A., Doros, G., & de Figueiredo, J. M. (2009). Diagnosis and measurement of subjective incompetence, the clinical hallmark of demoralization. *Psychotherapy and Psychosomatics, 78*(6), 342-345.

Cohen, J. (1988). *Statistical power analysis for behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cougle, J. R., Fitch, K. E., Fincham, F. D., Riccardi, C. J., Keough, M. E., & Timpano, K. R. (2012). Excessive reassurance seeking and anxiety pathology: Tests of incremental

associations and directionality. Journal of Anxiety Disorders, 26(1), 117-125.

doi:10.1016/j.janxdis.2011.10.001

Crawford, J. R., & Henry, J. D. (2003). The Depression, Anxiety Stress Scales (DASS):

normative data and latent structure in a large non-clinical sample. *British Journal of*

Clinical Psychology, 42, 111-131. doi:10.1348/014466503321903544

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological*

Bulletin, 52(4), 281-302.

de Figueiredo, J. M. (1999). Depression and demoralization: Phenomenological differences and

research perspectives. *Comprehensive Psychiatry, 34*(5), 308-311.

de Figueiredo, J. M. (2013). Distress, demoralization, and psychopathology: Diagnostic

boundaries. *European Journal of Psychiatry, 27*(1), 61-73.

de Figueiredo, J. M., & Frank, J. D. (1982). Subjective incompetence, the clinical hallmark of

demoralization. *Comprehensive Psychiatry, 23*(4), 353-363.

Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins

Symptom Checklist (HSCL): A self-report symptom inventory. *Behavioral Science, 19,*

1-15.

Dohrenwend, B. P., Shrout, P. E., Egri, G., & Mendelsohn, F. S. (1980). Nonspecific

psychological distress and other dimensions of psychopathology. *Archives of General*

Psychiatry, 37, 1229-1236.

Dozois, D. J. A., Dobson, K. S., Ahnberg, J. L. (1998). Psychometric evaluation of the Beck

Depression Inventory-II. *Psychological Assessment, 10*(2), 83-89.

Eaton, L. G., & Funder, D. C. (2001). Emotional experiences in daily life: Valence, variability,

and rate of change. *Emotion, 1,* 413-421.

Eden, D. (1988). Pygmalion, goal setting, and expectancy: Compatible ways to raise

    productivity. *Academyof Management Review, 13,* 639-652.

Eid, M., & Diener, E. (1999). Intraindividual variability in affect: Reliability, validity, and

    personality characteristics. *Journal of Personality and Social Psychology, 76*, 662-676.

Engel, G. L. A life setting conducive to illness. The giving-up—given-up complex. *Annals of*

    Internal Medicine, 69(2), 293-300.

Evraire, L. E., & Dozois, D. J. (2011). An integrative model of excessive reassurance seeking

    and negative feedback seeking in the development and maintenance of depression.

    Clinical Psychology Review, 31(8), 1291-1303. doi:10.1016/j.cpr.2011.07.014

Fichter, M. M., Quadflieg, N., & Brandl, B. (1993). Recurrent overeating: An empirical

    comparison of Binge Eating Disorder, Bulimia, Nervosa, and Obesity. *International*

    Journal of Eating Disorders, 14(1), 1-16.

Frank, J. D. (1961). Persuasion and healing: A comparative study. Baltimore, MD: Johns

    Hopkins Press.

Frank, J. D. (1974). Psychotherapy: The restoration of morale. *American Journal of Psychiatry,*

    131(3), 271-274.

Frederickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2,*

    300-319.

Forbey, J. D., & Ben-Porath, Y. S. (2007). A comparison of the MMPI-2 Restructured Clinical

    (RC) and Clinical Scales in a substance abuse treatment sample. *Psychological Services,*

    4, 46-58.

Forbey, J. D., & Ben-Porath, Y. S. (2008). Empirical correlates of the MMPI-2 Restructured

      Clinical (RC) scales in a nonclinical setting. *Journal of Personality Assessment, 90*(2),

      136-141. doi:10.1080/00223890701845161

Forbey, J. D., Lee, T. T. C., Ben-Porath, Y. S., Arbisi, P. A., & Gartland, D. (2013). Associatiosn

      between MMPI-2-RF Validity Scale Scores and Extra-Test Measures of Personality and

      Psychopathology. *Assessment, 20*(4), 448-461. doi:10.1177/10731911113478154

Gardner, D. G., & Pierce, J. L. (1988). Self-esteem and self-efficacy within the organizational

      context. *Group and Organization Management, 23,* 48-70.

Graham, J. R. (2012). *Assessing Personality and Psychopathology* (5th ed.). New York: Oxford

      University Press.

Grant, D. A., & Berg, E. (1948). A behavioral analysis of degree of reinforcement and ease of

      shifting to new responses in Weigl-type card-sorting problem. *Journal of Experimental*

      Psychology, 38, 404-411.

Greenberg, J., Reiner, K., Meiran, N. (2012). "Mind the trap": Mindfulness practice reduces

      cognitive rigidity. *PLoS ONE, 7*(5), e36206. doi:10.1317/journal.pone.0036206

Gruenberg, E. M. (1967). The social breakdown syndrome—some origins. *American Journal of*

      Psychiatry, 123, 1481-1489.

Handel, R. W., & Archer, R. P. (2008). An investigation of the psychometric properties of the

      MMPI-2 Restructured Clinical (RC) scales with mental health inpatients. *Journal of*

      Personality Assessment, 90(3), 239-249. doi:10.1080/00223890701884954

Harkness, A. R., & McNulty, J. L. (1994). The Personality Psychopathology Five (PSY-5): Issue

      from the pages of a diagnostic manual instead of a dictionary. In S. Strack & M. Lorr

(Eds.), *Differentiating normal and abnormal personality* (pp. 291-315). New York, NY: Springer.

Helmes, E. & Reddon, J. R. (1993). A perspective on development in assessing psychopathology: A critical review of the MMPI and MMPI-2. *Psychological Bulletin, 113*(3), 453-471.

Ionescu, T. (2012). Exploring the nature of cognitive flexibility. *New Ideas in Psychology, 30,* 190-200.

Joiner, T. E., Jr., Alfano, M. S., & Metalsky, G. I. (1993). Caught in the crossfire: Depression, self-consistency, self-enhancement, and the response of others. *Journal of Social and Clinical Psychology, 12,* 113-134. doi:10.1512/jscp.1993.12.2.113

Joiner, T. E., Jr., Katz, J., & Lew, A. (1999). Harbingers of depressotypic reassurance seeking: Negative life events, increased anxiety, and decreased self-esteem. Personality and Social Psychology Bulletin, 25(5), 632-639. doi:10.1177/0146167299025005008

Joiner, T. E., Jr., & Metalsky, G. I. (1995). A prospective test of an integrative interpersonal theory of depression: A naturalistic study of college roommates. *Journal of Personality and Social Psychology, 69*, 778-788.

Joiner, T. E., Jr., & Metalsky, G. I. (2001). Excessive reassurance seeking: Delineating a risk factor involved in the development of depressive symptoms. *Psychological Science, 12*(5), 371-371. doi:10.111/1467-9280.00369

Joiner, T. E., Jr., Pettit, J. W., Walker, R. L., Perez, M. & Cukrowicz, K. C. (2005). Evidence-based assessment of depression in adults. *Psychological Assessment, 17*(3), 267-277. doi:10.1037/1040-3590.17.3.267

Judge, T. A., Erez, A., & Bono, J. E. (1998). The power of being positive: The relationship between positive self-concept and job performance. *Human Performance 11,* 167-187.

Judge, T. A., Erez, A., Bono, J. E., & Thorsen, C. J. (2003). The core self-evaluations scale: Development of a measure. *Personnel Psychology, 56*(2), 303-331. doi:10.111/j.1744-6570.2003.tb00152.x

Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior, 19*, 151-188.

Katz, J., & Beach, S. R. H. (1997). Romance in the crossfire: When do women's depressive symptoms predict partner relationship dissatisfaction? *Journal of Social and Clinical Psychology, 16*(3), 243-258.

Kendler, T. S. (1964). Verbalization and optional reversal shifts among kindergarten children. *Journal of Verbal Learning and Verbal Behavior, 3,* 428-436.

Kissane, D. W., Wein, S., Love, A., Lee, X. Q., Kee, P. L. & Clarke, D. M. (2004). The Demoralization Scale: A report of its development and preliminary validation. *Journal of Palliative Care, 20,* 269-276.

Kleim, B., Gonzalo, D., & Ehlers, A. (2011). The Depressive Attributions Questionnaire (DAQ): Development of a short self-report measure of depressogent attributions. *Journal of Psychopathology and Behavioral Assessment, 33*(3), 375-385. doi:10.1007/s10862-011-9234-9.

Klohnen, E. C. (1996). Conceptual analysis and measurement of the construct of ego-resiliency. *Journal of Personality and Social Psychology, 70,* 1067-1079.

Korchin, S. J. (1975). *Modern Clinical Psychology.* New York, NY: Basic Books.

Kuppens, P., Van Mechelen, I., Nezlek, J. B., Dossche, D., & Timmermans, T. (2007).

    Individual differences in core affect variability and their relationship to personality and

    psychological adjustment. *Emotion, 7*(2), 262-274. doi:10.1037/1528-3542.7.2.262

Letzring, T. D., Block, J., & Funder, D. C. (2004). Ego-control and ego-resiliency:

    Generalization of self-report scales based on personality descriptions from acquaintances,

    clinicians and the self. *Journal of Research in Personality, 39*(4), 395-422.

Lovibond, S. H. & Lovibond, P. F. (1993). *Manual for the Depression Anxiety Stress Scales*

    (DASS). Psychology Foundation Monograph.

Luchins, A. S. (1942). Mechanization in problem solving: The effect of Einstellung.

    Psychological Monographs, 54(6), i-95. doi:10.1037/h0093502

Mangelli, L., Fava, G. A., Grandi, S. Grassi, L., Ottolini, F., Porcelli, P. … & Sonino, N. (2005).

    Assessing demoralization and depression in the setting of medical disease. *Journal of*

    Clinical Psychiatry, 66(3), 391-394.

Metalsky, G. I., Joiner, T. E., Jr., Hardin, T. S., & Abramson, L. Y. (1993). Depressive reactions

    to failure in a naturalistic setting: a test of the hopelessness and self-esteem theories of

    depression. Journal of Abnormal Psychology, 102, 101– 109.

Metalsky, G. I., Joiner, T. E., Jr., & Pothoff, J. G. (1994). *Development, specificity and*

    predictive validity of the Depressive Interpersonal Relationships inventory. Unpublished

    manuscript.

Mineka, S., Pury, C. L. S. & Luten, A. G. (1995). Explanatory style in anxiety and depression. In

    G. M. Buchanan & M. E. P. Seligman (Eds.), Explanatory style (pp. 135-158). Hillsdale,

    NJ: Erlbaum.

Miranda, R., Gallagher, M., Bauchner, B., Vaysman, R., & Marroquín, B. (2011). Cognitive

    inflexibility as a prospective predictor of suicidal ideation among young adults with a

    suicide attempt history. Depression and Anxiety, 29(3), 180-186. doi:10.1002/da.20915

Murray, G., Allen, N. B., & Trinder, J. (2002). Longitudinal investigation of mood variability

    and the FFM: Neuroticism predicts variability in extended states of positive and negative

    affect. *Personality and Individual Differences, 33,* 1217-1228.

Neuringer, C. (1964). Rigid thinking in suicidal individuals. *Journal of Consulting Psychology,*

    28(1), 54-58. doi:10.1037/h0045809

Nowicki, S. Jr., Duke, M. P. (1972). A locus of control scale for noncollege as well as college

    adults. *Journal of Personality Assessment, 38*(2), 136-137.

    doi:10.1080/00223891.1974.10119950

Patsiokas, A. T., Clum, G. A., & Luscomb, R. L. (1979). Cognitive characteristics of suicide

    attempters. *Journal of Consulting and Clinical Psychology, 47*(3), 478-484.

Ralph, J. A., & Mineka, S. (1998). Attributional style and self-esteem: The prediction of

    emotional distress following a midterm exam. Journal of Abnormal Psychology, 107(2),

    203-215. DOI: 10.1037/0021-843X.107.2.203

Reardon, J. M., & Williams, N. L. (2007). The specificity of cognitive vulnerabilities to

    emotional disorders: Anxiety sensitivity, looming vulnerability and explanatory

    style. Journal of Anxiety Disorders,21(5), 625-643. doi:10.1016/j.janxdis.2006.09.013

Robinson, S., Kissane, D. W., Brooker, J., Hempton, C., Michael, N., Fischer, J. … & Burney, S.

    (2016a). Refinement and revalidation of the Demoralization Scale: The DS-II—Internal

    Validity. *Cancer, 122*(14), 2251-2259. doi:10.1002/cncr.30015

Robinson, S., Kissane, D. W., Brooker, J., Hempton, C., Michael, N., Fischer, J. … & Burney, S. (2016b). Refinement and revalidation of thedemoralization scale: The DS-II—External Validity. *Cancer, 122*(14), 2260-2267. doi:10.1002/cncr.30012

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*(1), 1-28.

Russell, J. A. (2003). Core affect and the psychological construct of emotion. *Psychological Review, 110*(1), 145-172. doi:10.1037/0033-295X.110.1.145

Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology, 76*(5), 805-819.

Russell, J. A., Weiss, A., & Mendelsohn, G. A. (1989). Affect grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology, 57*(3), 493-502. doi:10.1037/0022-3514.57.3.493

Schmale, A. H., & Engel, G. L. (1967). The giving up-given up complex illustrated on film. *Archives of General Psychiatry, 17*, 135-145.

Schotte, D. E., & Clum, G. A. (1982). Suicide ideation in a college population: A test of a model. *Journal of Consulting and Clinical Psychology, 50*(5), 690-696.

Sellbom, M., & Ben-Porath, Y. S. (2005). Mapping the MMPI-2 Restructured Clinical scales onto normal personality traits: Evidence of construct validity. *Journal of Personality Assessment, 85*(2), 179-187. doi:10.1207/s153277752jpa8502_10

Sellbom, M., Ben-Porath, Y. S., Baum, L. J., Erez, E., & Gregory, C. (2008). Predictive validity of the MMPI-2 Restructured Clinical (RC) scals in a batterers' intervention program. *Journal of Personality Assessment, 90*(2), 129-135. doi:10.1080/00223890701845153

Sellbom, M., Ben-Porath, Y. S. & Bagby, R. M. (2008). On the hierarchical structure of mood

and anxiety disorders: Confirmatory evidence and elaboration of a model of temperament

markers. *Journal of Abnormal Psychology, 117*(3), 576-590. doi:10.1037/a0012536

Sellbom, M., Ben-Porath, Y. S., & Graham, J. R. (2006). Correlates of the MMPI-2 Restructured

Clinical (RC) scales in a college counseling setting. *Journal of Personality Assessment*,

86(1), 88-99.

Sellbom, M., Graham, J. R., & Schenk, P. W. (2006). Incremental validity of the MMPI-2

Restructured Clinical (RC) scales in a private practice sample. *Journal of Personality

Assessment, 86*(2), 196-205.

Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W.

(1982). The self-efficacy scale: Construction and validation. *Psychological Reports, 51,*

663-671.

Shkalim, E. (2015). Psychometric evaluation of the MMPI-2/MMPI-2-RF Restructured Clinical

scales in an Israeli sample. *Assessment, 22*(5), 607-618. doi:10.1177/1073191114555884

Smith, R. E. (1989). Effects of coping skills training on generalized self-efficacy and locus of

control. *Journal of Personality and Social Psychology, 56*(2), 228-233.

Swann, W. (2012). Self-verification theory. In P. A. Van LangeA. W. Kruglanski & E. T.

Higgins *Handbook of theories of social psychology: volume 2* (Vol. 2, pp. 23-42).

London: SAGE Publications Ltd. doi:10.4135/9781446249222.n27

Swann, W. B., & Read, S. J. (1981). Self verification processes; How we sustain our self-

conceptions. *Journal of Experimental Psychology, 17,* 351-372. doi:10.1016/0022-

1031(81)90043-3

Swann, W. B., Pelham, B. W., & Krull, D. S. (1989). Agreeable fancy or disagreeable truth?

Reconciling self-enhancement and self-verification. *Journal of Personality and Social Psychology, 49,* 1119-1128.

Swann, W. B., Wenzlaff, R. M., Krull, D. S., & Pelham, B. W. (1992). Allure of negative

feedback self-verification strivings among depressed persons. *Journal of Abnormal Psychology, 101*(2), 293-306.

Simms, L. J., Casillas, A., Clark, L. A., Watson, D. & Doebbeling, B. N. (2005). Psychometric

evaluation of the Restructured Clinical scales of the MMPI-2. *Psychological Assessment, 17*(3), 345-358. doi:10.1037/1040-3590.17.3.345

Tchanturia, K., Davies, H., Roberts, M., Harrison, A., Nakazato, M., Schmidt, U. .. & Morris, R.

(2012). Poor cognitive flexibility in eating disorders: Examining the evidence using the Wisconsin Card Sorting Task. *PLoS ONE, 7*(1), e28331. doi:10.1371/journal.pone.0028331.

Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety,

with an emphasis on self report. In A. H. Tuma, & J. D. Masere, (Eds.). *Anxiety and anxiety disorders* (pp. 681-706)*.* Hillsdale, NJ: Earlbaum.

Tellegen, A. (1988). The analysis of consistency in personality assessment. *Journal of*

Personality, 56(3), 621-663.

Tellegen, A., Ben-Porath, Y. S., & Sellbom, M. (2009). Construct validity of the MMPI-2

Restructured Clinical Scales: Reply to Rouse, Greene, Butcher, Nichols, and Williams. *Journal of Personality Assessment, 91*(3), 211-221. doi:10.1080/00223890902794192

Tellegen, A., Ben-Porath, Y. S. McNulty, J. L, Arbisi, P. A., Graham, J. R. & Kremmer, B. (2003). *The MMPI-2 Restructured Clinical Scales: Development, validation, and interpretation.* Minneapolis: University of Minnesota Press.

Tellegen, A., Ben-Porath, Y. S., Sellbom, M., Arbisi, P. A., McNulty, J. L., & Graham, J. R. (2006). Further evidence on the validity of the MMPI-2 Restructured Clinical (RC) scales: Addressing questions raised by Rogers, Sewell, Harrison, and Jordan and Nichols. *Journal of Personality Assessment, 87*(2), 148-171.

Tellegen A., Watson, D., & Clark, L., A. (1999a). On the dimensional and hierarchical structure of affect. *Psychological Science, 10*(4), 297-303. doi:10.111/1467-9280.00157

Tellegen, A., Watson, D., & Clark, L. A. (1999b). Further support for a hierarchical model of affect: Reply to Green and Salovey. *Psychological Science, 10*(4), 307-309.

Tugade, M. M., & Frederickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*(2), 320-333.

Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin, 96*(3), 465-490.

Watson, D., & Clark, L. A. (1994). The PANAS-X: Manual for the Positive and Negative Affect Schedule - Expanded Form. University of Iowa.

Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology, 97*(3), 346-353.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1090.

Watson D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological*

     Bulletin, 98(2), 219-235.

Table 1.

Descriptive statistics of collateral measures within demoralization's nomological net and

correlations with RCd organized by construct.

Measure	N	M	SD	Skewness	Kurtosis	α	r
Demoralization							
DS-II Total	188	7.23	6.64	1.29	1.08	.92	.83*
DS-II MP	188	2.34	3.27	1.68	2.52	.91	.78*
DS-II DC	188	4.89	3.74	1.04	.48	.83	.80*
SIS Basic	185	8.37	2.74	-.22	-1.07	.55	.45*
SIS Severity	185	13.10	3.95	.40	.15	.55	.47*
Depression							
DASS DEP	188	6.09	8.05	2.03	4.38	.94	.79*
PANAS-X PA	188	31.64	8.54	-.04	-.83	.90	-.41*
RC2	188	4.77	3.11	.45	-.51	.77	.63*
Negative Affect							
DASS AXY	188	8.43	7.59	1.33	1.86	.87	.64*
PANAS-X NA	188	19.21	6.71	.93	.51	.85	.66*
RC7	188	8.56	5.38	.62	-.25	.86	.78*

Note. DS-II = Demoralization Scale-II; DS-II MP = Demoralization Scale-II Meaning and Purpose subscale; DS-II DC = Demoralization Scale-II Distress and Coping subscale; SIS = Subjective Incompetence Scale; PANAS-X = Positive and Negative Affect Schedule—Expanded Version; PA = Positive Affect; DASS = Depressive, Anxiety, and Stress Scales; DEP = Depression; RC2 = Low Positive Emotions; NA = Negative Affect; AXY = Anxiety; RC7 = Dysfunctional Negative Emotions; *p < .001.

Table 2.

Descriptive statistics of measures of helplessness/hopelessness criterion variables and

correlations with RCd organized by construct.

Measure	*N*	*M*	*SD*	*Skewness*	*Kurtosis*	*α*	*r*
Cognitive Rigidity							
BCST PE	188	8.93	4.84	1.15	1.81	--	.02
Pessimistic Attribution Style							
DAQ Total	187	18.84	13.75	.87	.28	.95	.68*
DAQ Internal	187	5.27	3.75	.86	.74	.84	.60*
DAQ Stable	187	3.63	3.78	1.25	1.16	.88	.63*
DAQ Global	187	4.89	3.97	.75	.19	.84	.63*
DAQ PH	187	4.88	3.59	.61	-.30	.83	.58*

Note. BCST PE = Berg's Card Sorting Task Perseverative Errors; DAQ = Depressive Attributions Questionnaire; DAQ Internal = Depressive Attributions Questionnaire Internal Attributions Subscale; DAQ Stable = Depressive Attributions Questionnaire Stable Attributions Subscale; DAQ Global = Depressive Attributions Questionnaire Global Attributions Subscale; DAQ PH = Depressive Attributions Questionnaire Perceived Helplessness Subscale; *p* < .001;

Table 3.

Descriptive statistics of measures of inefficacy criterion variables and correlations with RCd

organized by construct.

Measure	*N*	*M*	*SD*	*Skewness*	*Kurtosis*	*α*	*r*
General Self-efficacy							
NGSE	182	34.18	5.50	-.27	.02	.92	-.58*
External Locus of Control							
ANSIE	186	11.77	5.28	.64	-.24	.69	.51*
Core Self-Evaluation							
CSES	184	3.69	.65	-.45	.16	.87	-.80*
Ego Resiliency							
ER89	187	42.10	7.17	-.65	1.15	.85	-.33*

Note. NGSE = New General Self-efficacy Scale; ANSIE = Adult Nowicki-Strickland Internal/External Scale; CSES = Core Self-Evaluation Scale; ER89 = Ego Resiliency Scale; *p* < .001.

Table 4.

Descriptive statistics of measures of interpersonal dysfunction criterion variables and

correlations with RCd organized by construct.

Measure	*N*	*M*	*SD*	*Skewness*	*Kurtosis*	*α*	*r*
			Excessive Reassurance Seeking				
DIRI – RS	183	2.71	1.52	.70	-.39	.88	.43*
TRSS GT	181	3.13	1.49	.46	-.25	.86	.48*
TRSS ET	181	3.12	1.66	.48	-.84	.91	.55*
			Negative Feedback Seeking				
FSQ	180	2.90	2.30	.87	.67	.34	.11

Note. DIRI – RS = Depressive Interpersonal Relationships Inventory – Reassurance Seeking Scale; TRSS GT = Threat-Related Reassurance Seeking Scale General Threat Scale; TRSS ET = Threat-Related Reassurance Seeking Evaluative Threat Scale; FSQ = Feedback Seeking Questionnaire; *p* < .001.

Table 5.

Hierarchical regressions predicting Depressive Attributes Questionnaire (DAQ) Total scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
	Depression Measures				
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	123.01(1)*	.40			.63*
Step 2: RCd	86.57(2)*	.49	30.47*	.09	.47*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: DASS DEP	86.57(2)*	.49	9.20	.03	.26
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	17.4(1)*	.08			-.29*
Step 2: RCd	78.23(2)*	.46	127.19*	.37	.67*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: PANAS-X PA	78.23(2)*	.46	.18	<.01	-.03
Low Positive Emotions (RC2)					
Step 1: RC2	49.44(1)*	.21			.46*
Step 2: RCd	78.63(2)*	.46	85.30*	.25	.64*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: RC2	78.63(2)*	.46	.61	<.01	.06
	Negative Affect Measures				
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	65.66(1)*	.26			.51*
Step 2: RCd	81.59(2)*	.47	72.23*	.21	.59*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: DASS ANX	81.59(2)*	.47	3.81	.01	.14
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	72.58(1)*	.28			.53*
Step 2: RCd	82.49(2)*	.47	66.66*	.19	.58*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: PANAS-X NA	82.49(2)*	.47	4.79	.01	.16
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	114.61(1)*	.38			.62*
Step 2: RCd	84.84(2)*	.48	34.36*	.10	.50*
Step 1: RCd	156.98(1)*	.46			.68*
Step 2: RC7	84.84(2)*	.48	7.33	.02	.23

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p* < .001; † Significance of β determined using t-test of unstandardized coefficient (*B*). *N* = 187.

Table 6.

Hierarchical regressions predicting Depressive Attributes Questionnaire (DAQ) Internal Scale scores.

Step	*F(df)*	R^2	ΔF	ΔR^2	$\beta^\dagger$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	104.43(1)*	.36			.60*
Step 2: RCd	62.99(2)*	.41	14.13*	.05	.35*
Step 1: RCd	106.44(1)*	.37			.60*
Step 2: DASS DEP	62.99(2)*	.40	12.76*	.04	.33*
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	19.90(1)*	.10			-.31*
Step 2: RCd	54.23(2)*	.37	80.10*	.27	.57*
Step 1: RCd	106.44(1)*	.36			.60*
Step 2: PANAS-X PA	54.23(2)*	.37	1.64	<.01	-.08
Low Positive Emotions (RC2)					
Step 1: RC2	46.81(1)*	.20			.45*
Step 2: RCd	54.76(2)*	.37	50.25*	.17	.53*
Step 1: RCd	106.44(1)*	.37			.60*
Step 2: RC2	54.76(2)*	.37	2.32	<.01	.11
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	54.18(1)*	.23			.48*
Step 2: RCd	56.22(2)*	.38	45.28*	.15	.51*
Step 1: RCd	106.44(1)*	.37			.60*
Step 2: DASS ANX	56.22(2)*	.38	4.17	.01	.15
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	54.52(1)*	.23			.48*
Step 2: RCd	55.71(2)*	.38	44.18*	.15	.51*
Step 1: RCd	106.44(1)*	.37			.60*
Step 2: PANAS-X NA	55.71(2)*	.38	3.53	.01	.14
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	73.47(1)*	.28			.53*
Step 2: RCd	55.19(2)*	.38	26.71*	.10	.48*
Step 1: RCd	106.44(1)*	.37			.60*
Step 2: RC7	55.19(2)*	.38	2.87	.01	.16

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p < .001; † Significance of β determined using t-test of unstandardized coefficient (*B*); *N* = 187.

Table 7.

Hierarchical regressions predicting Depressive Attributes Questionnaire (DAQ) Stable Scale

scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^\dagger$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	117.95(1)*	.39			.62*
Step 2: RCd	71.93(2)*	.43	16.21*	.05	.36*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: DASS DEP	71.93(2)*	.43	14.51*	.04	.34*
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	14.28(1)*	.07			-.27*
Step 2: RCd	60.01(2)*	.40	98.25*	.32	.67*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: PANAS-X PA	60.01(2)*	.40	.08	<.01	-.02
Low Positive Emotions (RC2)					
Step 1: RC2	41.82(1)*	.18			.43*
Step 2: RCd	60.43(2)*	.39	64.66*	.21	.59*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: RC2	60.43(2)*	.40	.60	<.01	.06
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	45.02(1)*	.20			.44*
Step 2: RCd	60.72(2)*	.39	61.66*	.20	.58*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: DASS ANX	60.72(2)*	.47	.94	<.01	.07
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	43.75(1)*	.19			.53*
Step 2: RCd	60.28(2)*	.40	62.31*	.21	.60*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: PANAS-X NA	60.28(2)*	.40	.40	<.01	.05
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	81.69(1)*	.31			.55*
Step 2: RCd	62.58(2)*	.41	30.45*	.10	.50*
Step 1: RCd	120.54(1)*	.40			.63*
Step 2: RC7	62.58(2)*	.41	3.19	.01	.16

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *$p < .001$; † Significance of β determined using t-test of unstandardized coefficient (*B*); $N = 187$.

Table 8.

Hierarchical regressions predicting Depressive Attributes Questionnaire (DAQ) Global Scale

scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^\dagger$
		Depression Measures			
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	86.33(1)*	.32			.56*
Step 2: RCd	63.50(2)*	.41	28.05*	.09	.49*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: DASS DEP	63.50(2)*	.41	3.90	.01	.18
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	8.80(1)	.05			-.21*
Step 2: RCd	60.75(2)*	.40	107.63*	.35	.65*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: PANAS-X PA	60.75(2)*	.40	.58	<.01	.05
Low Positive Emotions (RC2)					
Step 1: RC2	35.65(1)*	.16			.40*
Step 2: RCd	60.30(2)*	.40	71.37*	.23	.62*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: RC2	60.29(2)*	.40	.02	<.01	.01
		Negative Affect Measures			
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	62.56(1)*	.25			.50*
Step 2: RCd	64.85(2)*	.41	50.43*	.16	.52*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: DASS ANX	64.85 (2)*	.41	5.53	.02	.17
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	66.36(1)*	.26			.51*
Step 2: RCd	65.11(2)*	.41	47.26*	.15	.51*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: PANAS-X NA	65.11(2)*	.41	5.84	.02	.18
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	105.63(1)*	.36			.60*
Step 2: RCd	68.82(2)*	.43	20.73*	.06	.41*
Step 1: RCd	121.20(1)*	.40			.63*
Step 2: RC7	68.82(2)*	.43	10.33	.03	.29

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p < .001; Significance of β
determined using t-test of unstandardized coefficient (*B*); $N = 187$.

Table 9.

Hierarchical regressions predicting Depressive Attributions Questionnaire (DAQ) Perceived

Helplessness Scale scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	60.59(1)*	.25			.50*
Step 2: RCd	47.59(2)*	.34	26.30*	.09	.50*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: DASS DEP	47.59(2)*	.34	1.19	<.01	.11
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	14.57(1)*	.07			-.27*
Step 2: RCd	47.03(2)*	.34	73.76*	.27	.56*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: PANAS-X PA	47.03(2)*	.44	.45	<.01	-.04
Low Positive Emotions (RC2)					
Step 1: RC2	28.83(1)*	.14			.37*
Step 2: RCd	46.69(2)*	.33	55.98*	.20	.58*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: RC2	46.69(2)*	.34	<.01	<.01	<.01
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	40.90(1)*	.18			.43*
Step 2: RCd	47.82(2)*	.34	45.01*	.16	.52*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: DASS ANX	47.82 (2)*	.34	1.49	<.01	.10
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	56.75(1)*	.24			.49*
Step 2: RCd	50.90(2)*	.36	34.71*	.12	.46*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: PANAS-X NA	50.90(2)*	.36	5.59	.02	.18
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	78.10(1)*	.30			.55*
Step 2: RCd	51.39(2)*	.36	17.65*	.06	.24*
Step 1: RCd	93.89(1)*	.34			.58*
Step 2: RC7	51.39(2)*	.36	6.23	.02	.24

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; $p < .001$; Significance of β determined using t-test of unstandardized coefficient (*B*); $N = 187$.

Table 10.

Hierarchical regressions predicting g New General Self-Efficacy Scale (NGSE) Scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
		Depression Measures			
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	61.10(1)*	.25			-.50*
Step 2: RCd	46.80(2)*	.34	24.51*	.09	-.49*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: DASS DEP	46.80(2)*	.34	1.52	<.01	-.12
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	89.40(1)*	.33			-.58*
Step 2: RCd	82.90(2)*	.48	51.38*	.15	-.42*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: PANAS-X PA	82.90(2)*	.48	49.33*	.14	.41*
Low Positive Emotions (RC2)					
Step 1: RC2	71.94(1)*	.28			-.53*
Step 2: RCd	55.88(2)*	.38	28.74*	.10	.41*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: RC2	55.88(2)*	.38	13.56*	.05	-.28*
		Negative Affect Measures			
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	41.89(1)*	.19			-.44*
Step 2: RCd	47.89(2)*	.35	42.76*	.16	-.51*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: DASS ANX	47.19 (2)*	.35	2.03	<.01	-.11
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	41.96(1)*	.19			-.44*
Step 2: RCd	46.66(2)*	.34	41.85*	.15	-.52*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: PANAS-X NA	46.66(2)*	.34	1.34	.01	-.09
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	58.64(1)*	.25			-.50*
Step 2: RCd	46.51(2)*	.34	26.18*	.10	-.50*
Step 1: RCd	91.81(1)*	.34			-.58*
Step 2: RC7	46.51(2)*	.34	1.14	<.01	-.10

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *$p < .001$; Significance of β determined using t-test of unstandardized coefficient (*B*); $N = 182$.

Table 11.

Hierarchical regressions predicting Adult Nowicki-Strickland Internal/External Scale (ANSIE)

scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	31.48(1)*	.15			.38*
Step 2: RCd	31.96(2)*	.26	27.85*	.11	.54*
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: DASS DEP	31.96(2)*	.26	.17	<.01	-.04
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	11.49(1)*	.06			-.24
Step 2: RCd	32.12(2)*	.26	49.71*	.20	.49*
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: PANAS-X PA	32.12(2)*	.26	.40	<.01	-.04
Low Positive Emotions (RC2)					
Step 1: RC2	26.97(1)*	.13			.36*
Step 2: RCd	32.10(2)*	.26	32.60*	.13	.48*
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: RC2	32.10(2)*	.26	.37	<.01	.05
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	36.81(1)*	.17			.41*
Step 2: RCd	33.91(2)*	.27	26.02*	.26	.52*
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: DASS ANX	33.91 (2)*	.27	3.06	.01	.14
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	30.27(1)*	.14			.38*
Step 2: RCd	32.51(2)*	.26	29.97*	.12	.46*
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: PANAS-X NA	32.51	.26	.97	<.01	.08
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	55.31(1)*	.23			.48
Step 2: RCd	34.97(2)*	.28	11.48*	.05	.34
Step 1: RCd	64.05(1)*	.26			.51*
Step 2: RC7	34.97(2)*	.28	4.63	.02	.22

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p < .001; Significance of β determined using t-test of unstandardized coefficient (*B*); N = 186.

Table 12.

Hierarchical regressions predicting Core Self-Efficacy Scale (CSES) scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
		Depression Measures			
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	194.17(1)*	.52			-.72*
Step 2: RCd	177.48(2)*	.66	78.32*	.15	-.62*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: DASS DEP	177.48(2)*	.66	11.38	.02	-.24*
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	131.41(1)*	.42			-.65*
Step 2: RCd	188.95(2)*	.68	143.56*	.26	-.65*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: PANAS-X PA	214.12(2)*	.70	37.68*	.06	.27*
Low Positive Emotions (RC2)					
Step 1: RC2	131.41(1)*	.42			-.65*
Step 2: RCd	188.95(2)*	.68	143.56*	.26	-.65*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: RC2	188.95(2)*	.68	19.61*	.04	-.24*
		Negative Affect Measures			
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	96.31	.34			-.49*
Step 2: RCd	168.08(2)*	.65	157.19*	.30	-.42*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: DASS ANX	168.08(2)*	.65	4.62	.01	-.12
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	57.84(1)*	.24			-.49*
Step 2: RCd	46.94(2)*	.34	27.70*	.10	-.42*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: PANAS-X NA	174.57(2)*	.66	9.29	.02	-.18
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	120.30(1)*	.40			-.63*
Step 2: RCd	161.66(2)*	.64	122.62*	.24	-.79*
Step 1: RCd	325.06(1)*	.64			-.80*
Step 2: RC7	161.66(2)*	.64	.01	<.01	-.01

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *$p < .001$; Significance of β determined using t-test of unstandardized coefficient *(B)*; $N = 184$.

Table 13.

Hierarchical regressions predicting Ego Resiliency Scale (ER89) scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	17.29(1)*	.09			-.29*
Step 2: RCd	11.67(2)*	.11	5.64	.03	-.27*
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: DASS DEP	11.67(2)*	.11	.53	<.01	-.08
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	54.47(1)*	.23			.48*
Step 2: RCd	30.80(2)*	.25	5.74	.02	-.17
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: PANAS-X PA	30.80(2)*	.25	34.58*	.24	.41*
Low Positive Emotions (RC2)					
Step 1: RC2	49.92(1)*	.21			-.46*
Step 2: RCd	25.28(2)*	.22	.67	<.01	-.07
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: RC2	25.28(2)*	.21	24.75*	.11	-.42*
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	9.71(1)*	.05			-.22*
Step 2: RCd	11.40(2)*	.11	12.49	.06	-.32*
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: DASS ANX	11.40(2)*	.11	.05	<.01	-.02
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	5.66(1)*	.03			-.17*
Step 2: RCd	11.77(2)*	.11	17.38*	.08	-.38*
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: PANAS-X NA	11.77(2)*	.11	.71	<.01	.08
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	20.80(1)*	.10			-.32*
Step 2: RCd	12.42(2)*	.11	3.74	.02	-.21
Step 1: RCd	22.87(1)*	.11			-.33*
Step 2: RC7	12.42(2)*	.12	1.87	.01	-.15

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p* < .001; Significance of β determined using t-test of unstandardized coefficient *(B)*; *N* = 187.

Table 14.

Hierarchical regressions predicting Depressive Interpersonal Relationships Inventory –

Reassurance Seeking Scale (DIRI-RS) scores.

Step	F(df)	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	19.54(1)*	.10			.31*
Step 2: RCd	20.61(2)*	.19	19.67*	.09	.49*
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: DASS DEP	20.61(2)*	.19	.41	<.01	-.07
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	9.10(1)*	.05			-.22*
Step 2: RCd	20.70(2)*	.19	30.80*	.14	.41*
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: PANAS-X PA	20.70(2)*	.19	.56	<.01	-.06
Low Positive Emotions (RC2)					
Step 1: RC2	23.23(1)*	.11			.34*
Step 2: RCd	21.30(2)*	.19	17.28*	.08	.36*
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: RC2	21.30(2)*	.19	1.54	.01	.11
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	18.90(1)*	.10			-.31*
Step 2: RCd	20.62(2)*	.19	20.32*	.09	-.39*
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: DASS ANX	20.62(2)*	.19	.43	<.01	.06
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	31.12(1)*	.15			.38*
Step 2: RCd	22.89(2)*	.20	12.65*	.06	.31*
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: PANAS-X NA	22.89(2)*	.20	4.13	.02	.18
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	31.31(1)*	.15			-.32*
Step 2: RCd	21.18(2)*	.19	9.57	.04	-.21
Step 1: RCd	40.94(1)*	.18			.43*
Step 2: RC7	21.18(2)*	.19	1.35	.01	.13

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *$p < .001$; Significance of β determined using t-test of unstandardized coefficient *(B)*; *N* = 183.

Table 15.

Hierarchical regressions predicting Threat-Related Reassurance Seeking (TRSS) – General

Threat Scale scores.

Step	F(df)	R^2	Δ F	Δ R^2	$\beta^{\dagger}$
		Depression Measures			
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	27.88(1)*	.13			.37*
Step 2: RCd	26.34(2)*	.23	21.60*	.09	.50*
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: DASS DEP	26.34(2)*	.23	.04	<.01	-.02
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	5.53(1)	.03			-.17*
Step 2: RCd	26.41(2)*	.23	45.90*	.22	.49*
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: PANAS-X PA	26.41(2)*	.23	.14	<.01	.03
Low Positive Emotions (RC2)					
Step 1: RC2	20.63(1)*	.10			.32*
Step 2: RCd	26.39(2)*	.23	28.94*	.13	.46*
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: RC2	26.39(2)*	.23	.12	<.01	.03
		Negative Affect Measures			
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	41.19(1)*	.19			.43*
Step 2: RCd	30.45(2)*	.26	16.21*	.07	.34*
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: DASS ANX	30.45(2)*	.26	6.39	.03	.21
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	48.26(1)*	.21			.46*
Step 2: RCd	32.75(2)*	.27	13.80*	.06	.31*
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: PANAS-X NA	32.75(2)*	.27	9.94	.04	.26
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	55.73(1)*	.24			.49*
Step 2: RCd	31.74(2)	.26	6.15	.03	.25
Step 1: RCd	52.93(1)*	.23			.48*
Step 2: RC7	31.74(2)*	.26	8.38	.04	.13

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *$p < .001$; Significance of β determined using t-test of unstandardized coefficient *(B)*; $N = 181$.

Table 16.

Hierarchical regressions predicting Threat-Related Reassurance Seeking (TRSS) – Evaluative

Threat Scale scores.

Step	$F(df)$	R^2	ΔF	ΔR^2	$\beta^{\dagger}$
Depression Measures					
Depression Anxiety and Stress Scales – Depression Scale (DASS DEP)					
Step 1: DASS DEP	33.78(1)*	.16			.40*
Step 2: RCd	38.50(2)*	.30	36.52*	.14	.61*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: DASS DEP	38.50(2)*	.30	.67	<.01	-.08
PANAS-X Positive Affect Scale (PANAS-X PA)					
Step 1: PANAS-X PA	14.96(1)*	.08			-.28*
Step 2: RCd	38.65(2)*	.30	57.62*	.23	.52*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: PANAS-X PA	38.65(2)*	.30	.89	<.01	-.07
Low Positive Emotions (RC2)					
Step 1: RC2	35.54(1)*	.17			.41*
Step 2: RCd	39.08(2)*	.31	35.73*	.14	.48*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: RC2	39.08(2)*	.31	1.49	.01	.10
Negative Affect Measures					
Depression Anxiety and Stress Scales – Anxiety Scale (DASS ANX)					
Step 1: DASS ANX	48.93(1)*	.22			.46*
Step 2: RCd	41.97(2)*	.32	27.71*	.11	.43*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: DASS ANX	41.97(2)*	.32	5.54	.02	.19
PANAS-X Negative Affect Scale (PANAS-X NA)					
Step 1: PANAS-X NA	57.59(1)*	.24			.46*
Step 2: RCd	44.66(2)*	.33	24.25*	.09	.39*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: PANAS-X NA	44.66(2)*	.33	9.31	.04	.24
Dysfunctional Negative Emotions (RC7)					
Step 1: RC7	64.23(1)*	.26			.51*
Step 2: RCd	41.88(2)*	.31	14.64*	.06	.37*
Step 1: RCd	76.46(1)*	.30			.55*
Step 2: RC7	41.88(2)*	.32	5.41	.02	.23

Note. PANAS-X = Positive and Negative Affect Schedule—Expanded Version; *p < .001; Significance of β
determined using t-test of unstandardized coefficient *(B)*; *N* = 181.