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Factor Structure and Initial Validation of a Multidimensional Measure of Difficulties in the Regulation of Positive Emotions: The DERS-Positive

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Abstract

Emotion regulation difficulties are a transdiagnostic construct relevant to numerous clinical difficulties. Although the Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004) is a multidimensional measure of maladaptive ways of responding to emotions, it focuses on difficulties with the regulation of negative emotions and does not assess emotion dysregulation in the form of problematic responding to positive emotions. The aim of this study was to develop and validate a measure of clinically-relevant difficulties in the regulation of positive emotions (DERS-Positive). Findings revealed a 3-factor structure and supported the internal consistency and construct validity of the total and subscale scores.

Keywords

assessment; emotion regulation; emotion dysregulation; Difficulties in Emotion Regulation Scale; positive emotions

Emotion regulation is a foundational skill considered to be integral to normative development and adaptive functioning across multiple domains (Calkins, 1994; Cole, Michel, & Teti, 1994). Difficulties in emotion regulation, on the other hand, have been theoretically- and empirically-linked to a variety of maladaptive behaviors (e.g., deliberate self-harm, substance use, risky sexual behaviors, and overall risky behaviors; Fox, Hong, & Sinha, 2008; Gratz & Roemer, 2008; Linehan, 1993; Tull, Weiss, Adams, & Gratz, 2012;

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Weiss, Tull, Viana, Anestis, & Gratz, 2012) and psychiatric difficulties (e.g., posttraumatic stress disorder, borderline personality disorder, generalized anxiety disorder, and depression; Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006; Gross & Muñoz, 1995; Mennin, Heimberg, Turk, & Fresco, 2002; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006; Tull, Barrett, McMillan, & Roemer, 2007; Weiss, Tull, Anestis, & Gratz, 2013), and are considered a key mechanism in the pathogenesis and treatment of numerous clinical difficulties (for a review, see Gratz & Tull, 2010). This literature supports emotion regulation difficulties as a transdiagnostic construct with relevance to a variety of clinically-relevant difficulties.

Developmental researchers have defined emotion regulation as the intrinsic and extrinsic processes involved in monitoring, evaluating, and modifying emotional reactions to accomplish one's goals (Thompson, 1994; Thompson & Calkins, 1996). Drawing upon this definition, Gratz and Roemer (2004) proposed an integrative conceptualization of emotion regulation in adulthood as a multidimensional construct involving the awareness, understanding, and acceptance of emotions; ability to control impulsive behaviors and engage in goal-directed behaviors when experiencing negative emotions; and the flexible use of situationally-appropriate strategies to modulate the intensity and duration of emotional responses, rather than to eliminate emotions entirely (see also Gratz & Tull, 2010). Conversely, deficits in any of these areas are considered indicative of emotion regulation difficulties. Although the measure of emotion regulation difficulties that Gratz and Roemer developed based on their conceptualization (i.e., the Difficulties in Emotion Regulation Scale; Gratz & Roemer, 2004) has garnered strong empirical support (for a review, see Gratz & Tull, 2010), this measure is primarily focused on difficulties with the regulation of negative emotional states and does not directly address the potential for emotion dysregulation in the form of problematic responding to positive emotions.

Given the comparatively limited attention given to positive (vs. negative) emotions within psychopathology (with certain exceptions, e.g., mania; see Gruber, Johnson, Oveis, & Keltner, 2008), it is not surprising that most research on the regulation of emotions has focused on negative emotional experiences. Nonetheless, several lines of inquiry provide support for the clinical utility of examining difficulties in the regulation of positive emotions as well. First, theoretical and empirical literature suggest that individuals may experience dysregulation across both positive and negative emotional systems (e.g., Linehan, 1993; Linehan, Bohus, & Lynch, 2007; Segal, Williams, & Teasdale, 2002). For example, patients with borderline personality disorder and major depressive disorder have been found to display nonacceptance of both negative *and* positive mood states (e.g., Beblo et al., 2012; Kissen, 1986), judging both to be undesirable, unpredictable, and/or frightening. Similarly, evidence suggests that individuals with posttraumatic stress or panic disorders may seek to avoid any form of arousal, including the physiological arousal associated with some positive emotional states (see Roemer, Litz, Orsillo, & Wagner, 2001; Tull, 2006). Second, research indicates that individuals do indeed regulate positive emotional experiences (Gross, Richards, & John, 2006), and the use of ineffective emotion regulation strategies (e.g., suppression) to modulate positive emotions has been found to result in increased

sympathetic nervous system activation (Gross & Levenson, 1997), suggesting that the modulation of positive emotions is cognitively taxing (Gross & John, 2003).

Third, the effective regulation of positive emotions has been found to be associated with a range of positive outcomes, including higher life satisfaction and self-esteem and lower hopelessness and depression (for a review, see Tugade & Fredrickson, 2007). Moreover, Fredrickson and colleagues suggest that the effective regulation of positive emotions may buffer the effects of negative emotions and play a role in negative emotion regulation (Fredrickson & Levenson, 1998; Fredrickson, Mancuso, Branigan, & Tugade, 2000). Fourth, positive emotional states in particular have been found to increase distractibility (Dreisbach & Goschke, 2004) and lead to less discriminative use of information (Forgas & Bower, 1987), which may increase the risk for disadvantageous decision-making focused on short-versus long-term goals (Slovic, Finucane, Peters, & MacGregor, 2004). Finally, consistent with research examining the negative outcomes associated with deficits in the regulation of negative emotions (e.g., Anestis, Selby, & Joiner, 2007; Anestis, Smith, Fink, & Joiner, 2009; Tull et al., 2012), growing evidence indicates that the tendency to behave impulsively when experiencing intense positive emotions (a dimension of impulsivity that overlaps with the dimension of emotion regulation difficulties involving the control of impulsive behavior in the context of emotional arousal; Cyders & Smith, 2007, 2008b; Gratz & Roemer, 2004) is associated with a range of clinically-relevant maladaptive behaviors, including drug and alcohol use, gambling, and risky sexual behavior (e.g., Cyders, Flory, Rainer, & Smith, 2009; Cyders & Smith, 2008a; Cyders et al., 2007; Zapolski, Cyders, & Smith, 2009). Moreover, preliminary findings suggest that maladaptive responses to intense positive and negative emotions evidence differential relations with particular clinical difficulties (e.g., Cyders et al., 2007).

Notably, however, despite growing support for the relevance of difficulties in the regulation of positive emotions to psychopathology and overall functioning, research in this area remains limited. Likely contributing to the relative lack of research in this area is the absence of a comprehensive measure assessing difficulties regulating positive emotions. Thus, the aim of the current study was to develop and validate a measure of clinically-relevant difficulties in the regulation of positive emotions (i.e., happiness) in adults. In particular, drawing upon both (a) Gratz and Roemer's (2004) comprehensive measure of emotion regulation difficulties focused predominantly on negative emotions and (b) theoretical and empirical literature on the experience and regulation of positive emotions in psychopathology (for a review, see Cyders & Smith, 2008b), items were chosen to reflect difficulties in the following dimensions of positive emotion regulation: nonacceptance of positive emotions, difficulties controlling behaviors when experiencing positive emotions, and difficulties engaging in goal-directed behaviors in the context of positive emotions.

Method

Participants

Questionnaire packets were distributed to 479 students from undergraduate psychology courses offered at an urban university in the northeastern United States. Of these, 373 packets were returned, resulting in a response rate of 78%. There were no significant

differences in age, racial/ethnic background, or gender between participants who returned the packets and those who did not. Thirteen participants were missing extensive data on the measure of difficulties in the regulation of positive emotions and were thus excluded from analyses.

The final sample of 360 participants ranged in age from 18 to 55 ($M = 23.0$; $SD = 5.6$) and was racially/ethnically diverse, as 61.7% of participants self-identified as White, 18.3% as Asian, 6.9% as Black/African-American, 4.2% as Latino/a, and 8.9% as another or unspecified racial/ethnic background. The majority of participants were female ($n = 262$; 72.8%), single (81.4%), and heterosexual (89.2%). There was little difference, demographically, between participants who completed the measure of difficulties in the regulation of positive emotions and those who did not.

Measures

Difficulties in Emotion Regulation Scale-Positive—The Difficulties in Emotion Regulation Scale-Positive (DERS-Positive; Gratz, 2002) is a 15-item self-report measure developed to assess clinically relevant difficulties in the regulation of positive emotions. This measure was modeled after the original DERS (Gratz & Roemer, 2004), with items modified to assess difficulties stemming from the experience of positive emotions (vs. negative emotions). Specifically, rather than beginning with the stem “When I’m upset” like many of the original DERS items, the DERS-Positive items begin with the stem “When I’m happy.” DERS-Positive items were chosen to reflect difficulties within the following dimensions of emotion regulation: (a) acceptance of positive emotions; (b) ability to engage in goal-directed behavior when experiencing positive emotions; and (c) ability to control impulsive behaviors when experiencing positive emotions. Participants are asked to indicate how often the items apply to themselves, with responses ranging from 1 to 5, where 1 is almost never (0–10%), 2 is sometimes (11–35%), 3 is about half the time (36–65%), 4 is most of the time (66–90%), and 5 is almost always (91–100%). Higher scores indicate greater difficulties in the regulation of positive emotions.

Measures of emotion dysregulation—The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item self-report measure that assesses individuals’ typical levels of emotion dysregulation across six domains: nonacceptance of negative emotions, difficulties engaging in goal-directed behaviors when distressed, difficulties controlling impulsive behaviors when distressed, limited access to emotion regulation strategies perceived as effective, lack of emotional awareness, and lack of emotional clarity. Participants rate the extent to which each item applies to them on a 5-point Likert-type scale ($1 = \text{almost never}$, $5 = \text{almost always}$). The DERS has been found to demonstrate good test-retest reliability and adequate construct and predictive validity (Gratz & Roemer, 2004; Gratz & Tull, 2010), and to be significantly associated with objective measures of emotion regulation difficulties, including behavioral (Gratz, Bornovalova, Delany-Brumsey, Nick, & Lejuez, 2007; Gratz et al., 2006) and physiological (Vasilev, Crowell, Beauchaine, Mead, & Gatzke-Kopp, 2009) measures. Higher scores indicate greater emotion regulation difficulties. Internal consistency in the current sample was good for the overall scale ($\alpha = 0.93$) and subscales (α s = 0.80–0.89).

The Generalized Expectancy for Negative Mood Regulation Scale (NMR; Catanzaro & Mearns, 1990) is a 30-item self-report measure that assesses expectancies for the self-regulation of negative moods. Participants rate the extent to which they believe that their attempts to alter their negative moods will work on a 5-point Likert-type scale (*1=strongly disagree, 5=strongly agree*). The NMR has been found to have adequate construct and discriminant validity and test–retest reliability over periods of 3–4 weeks and 6–8 weeks (Catanzaro & Mearns, 1990). Higher scores indicate higher expectancies for negative mood regulation, or greater emotion regulation. Internal consistency in this sample was good ($\alpha = 0.90$).

The DERS and NMR were included to assess the construct validity of the DERS-Positive. Scores on the DERS (which assess emotion regulation difficulties) were expected to be positively associated with DERS-Positive scores. Scores on the NMR (which assesses emotion regulation expectancies) were expected to be negatively associated with DERS-Positive scores.

Measures of emotional expressivity—The Emotional Expressivity Scale (EES; Kring, Smith, & Neale, 1994) is a 17-item questionnaire that assesses general emotional expressivity across both valence of emotion (i.e., positive or negative) and manner of expression. The EES has been found to demonstrate adequate convergent, discriminant, and construct validity and good test-retest reliability, and is significantly correlated with spontaneous emotional expressiveness in the laboratory (Kring et al., 1994). Higher scores reflect greater emotional expressivity. Internal consistency in this sample was good ($\alpha = 0.93$). Given that emotional expressiveness is theorized to facilitate adaptive emotion regulation (Cole et al., 1994; Kopp, 1989; Linehan, 1993), scores on the DERS-Positive were expected to be negatively correlated with EES scores of emotional expressivity.

The Self-Expressiveness in the Family Questionnaire (SEFQ; Halberstadt, Parke, Cassidy, Stifter, & Fox, 1995) is a 40-item self-report measure that assesses an individual's general level of emotional expressiveness (across different emotions and different modes of expression) within the family context. Participants are asked to rate the frequency with which they express themselves to family members across a variety of affective-laden situations using a 9-point Likert-type scale (*1=not at all frequently, 9=very frequently*). The SEFQ has been found to have adequate convergent, discriminant, and construct validity and test-retest reliability over periods of eight months and one year (Halberstadt et al., 1995). The SEFQ measures the expression of both positive (SEFQ-positive) and negative (SEFQ-negative) emotions within the family, with higher scores indicating greater emotional expressiveness. Internal consistency in this sample was good for both subscales (α s > 0.85). The expression of positive versus negative emotions within the family context has been found to evidence differential relations with outcomes (see Halberstadt et al., 1995), with positive expressiveness associated with positive outcomes and adaptive functioning (Halberstadt et al., 1995; Kao, Nagata, & Peterson, 1997) and negative expressiveness (considered indicative of expressed emotion) associated with greater internalizing and externalizing problems (Dallarie et al., 2006; Stocker, Richmond, Rhoades, & Kiang, 2007). Thus, scores on the DERS-Positive were expected to be negatively correlated with SEFQ-positive scores and positively associated with SEFQ-negative scores.

Measure of emotional vulnerability—The Affect Intensity Measure (AIM; Larsen & Diener, 1987) is a 40-item self-report measure of trait emotional intensity and reactivity. Research provides support for the reliability, stability, and construct validity of the AIM (Flett, Boase, McAndrew, Blankstein, & Pliner, 1986; Larsen & Diener, 1987; Larsen, Diener, & Emmons, 1986). Although originally developed as a unidimensional measure, research suggests that the AIM is multidimensional, measuring both positive and negative emotional intensity and reactivity (Weinfurt, Bryant, & Yarnold, 1994; Williams, 1989). Thus, for the purposes of this study, separate positive and negative emotional intensity/reactivity variables were created (based on Weinfurt et al.'s [1994] criteria), with higher scores indicating greater emotional intensity/reactivity ($\alpha > 0.78$ in this sample). Emotional intensity/reactivity is theorized to interfere with adaptive emotion regulation (Calkins & Johnson, 1998; Linehan, 1993), increasing the risk for emotion regulation difficulties (Flett, Blankstein, & Obertynski, 1996; Melnick & Hinshaw, 2000). Thus, scores on the DERS-Positive were expected to be positively correlated with AIM scores, with positive emotional intensity/reactivity expected to be particularly relevant to difficulties in the regulation of positive emotions.

Measure of emotional neglect—The Parental Bonding Index (PBI; Parker, Tupling, & Brown, 1979) is a 25-item self-report measure used to assess recollections of the degree to which each parent was affectionate and controlling over the first 16 years of life. Participants score their perceptions of maternal and paternal behavior on 4-point Likert-style scales ($0 = \text{very unlike}$, $3 = \text{very like}$). Research supports the reliability and construct validity of the PBI, with convergence between twin sibling reports, parent self-report, and independent raters suggesting that the measure is a valid assessment of both perceived and actual parenting style (Mackinnon, Henderson, & Andrews, 1991; Parker, 1981; Parker & Lipscombe, 1981). The parental affection items (which assess parental behavior ranging from affection to neglect) were used in the present study to assess childhood experiences of emotional neglect. Items were recoded so that higher scores indicate more emotional neglect, and ratings were averaged across all 24 items (12 maternal items and 12 paternal items) to create an overall variable of parental emotional neglect ($\alpha = 0.93$ in this sample). Given that emotional neglect has been theorized to interfere with the development of adaptive emotion regulation (Cicchetti & Howes, 1991; Linehan, 1993; Thompson & Calkins, 1996), scores on the DERS-Positive were expected to be positively correlated with PBI scores of emotional neglect. In particular, given theoretical and empirical literature linking experiences of emotional maltreatment to emotional nonacceptance specifically (e.g., Gratz et al., 2007; Linehan, 1993; Soenke, Hahn, Tull, & Gratz, 2010), emotional neglect was expected to be most relevant to the nonacceptance of positive emotions (vs. the other dimensions of positive emotion regulation difficulties).

Measures of maladaptive emotion regulation strategies—The Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) is a 9-item self-report measure of experiential avoidance (i.e., the tendency to avoid unwanted internal experiences, particularly emotions). Participants rate the extent to which each item applies to them on a 7-point Likert-type scale ($1 = \text{never true}$, $7 = \text{always true}$). The AAQ has been found to have adequate convergent, discriminant, and concurrent validity (Hayes et al., 2004), and to be

significantly associated with a behavioral measure of the willingness to experience emotional distress (Gratz et al., 2006). Higher scores indicate greater experiential avoidance ($\alpha = 0.64$ in this sample).

The Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986) is a 28-item self-report measure assessing a range of dissociative experiences (i.e., depersonalization, derealization, amnesia, absorption, and imaginative involvement). Participants rate the frequency with which they have experienced each item on an 11-point scale (from 0% of the time to 100% of the time, in 10% increments). The DES has been found to have good split-half and test-retest reliability, as well as good construct and criterion-related validity (Bernstein & Putnam, 1986; Carlson & Putnam, 1993). The mean score across all DES items was computed, with higher scores indicating greater frequency of dissociative experiences. Internal consistency in this sample was good ($\alpha = 0.93$).

Both experiential avoidance and dissociation have been theorized to be maladaptive strategies for regulating emotions (Chapman, Gratz, & Brown, 2006; Hayes et al., 1996; Wagner & Linehan, 1998), with both experientially-avoidant behaviors and dissociative behaviors functioning to escape, avoid, or alleviate unwanted emotional experiences. Thus, scores on the DERS-Positive were expected to be positively correlated with both AAQ and DES scores.

Procedure

All procedures were approved by the university's Institutional Review Board. Participants were recruited through undergraduate psychology courses at a public university. At the time of recruitment, potential participants were informed fully, both verbally and in writing, about the purpose of the study. Following the provision of written informed consent, individuals who chose to participate completed a questionnaire packet including the measures described above. Participants received research credits in exchange for their participation.

Results

Factor Structure

An exploratory factor analysis (EFA) using the principal axis factoring extraction method and promax oblique rotation (allowing factors to be correlated) was conducted on the 15 DERS-Positive items. The scree test was used in the present study as the criterion for retaining factors, a decision supported by recommendations suggesting that the scree test is a more accurate method for retaining factors than the criterion of eigenvalues >1.00 (i.e., Kaiser-Guttman criterion). Specifically, following the recommendations of Costello and Osborne (2005), who suggest selecting the number of factors to retain based on the number of points above the main "break" in the scree plot, results of the scree test suggested retaining four factors. Eigenvalues up to eight factors for this initial EFA were as follows: 6.49, 1.89, 1.22, 0.92, 0.65, 0.60, 0.49, and 0.47. Assignment of items to the four factors was based on factor loadings of $\geq .40$. One of the identified factors was comprised of only two items (Item 2 ["When I'm happy, I feel like I can remain in control of my behaviors"] and

Item 10 [When I'm happy, I can still get things done]). Given potential problems associated with the reliability of a two item subscale, these items were excluded from further analyses. This decision was further supported by the low communality after extraction (.28) for Item 2. All remaining items exhibited factor loadings of .40 (range = .46 – .85), and no items were found to cross-load (i.e., no items exhibited loadings of .40 across the factors). After excluding these two items, the EFA was conducted a second time on the remaining 13 items to ensure that the factor loadings remained .40 (see Table 1). Upon extraction, the remaining three factors accounted for 60.26% of the total variance of the variables (see Table 2 for the eigenvalues and percent variance accounted for by the three factors initially and upon extraction).

The three factors comprising the DERS-Positive are interpretable and consistent with the multidimensional conceptualization of difficulties in the regulation of negative emotions underlying the original DERS (see Table 3). Factor 1 is composed of items reflecting a tendency to experience negative secondary emotions in response to positive emotions, and was labeled Nonacceptance of Positive Emotions (Nonacceptance). Factor 2 is composed of items reflecting difficulties accomplishing tasks and concentrating when experiencing positive emotions, and was labeled Difficulties Engaging in Goal-Directed Behavior (Goals). Factor 3 is composed of items reflecting difficulties controlling behaviors when experiencing positive emotions, and was labeled Impulse Control Difficulties (Impulse). As expected, the subscales were significantly intercorrelated (Nonacceptance and Goals, $r = .36, p < .001$; Nonacceptance and Impulse, $r = .70, p < .001$; Goals and Impulse, $r = .53, p < .001$). Means and standard deviations for the total and subscale scores, both overall and across gender, are presented in Table 4. As shown in Table 4, significant gender differences were found for the Total score and the Nonacceptance and Impulse subscale scores, with men reporting greater difficulties in the regulation of positive emotions than women.

Internal Consistency

Cronbach's alphas were calculated to determine the internal consistency of the full scale comprised of all items, as well as the three subscales. Results revealed high internal consistency for the full scale and all three subscales (see Table 4).

Construct Validity

As shown in Table 5, correlations between the DERS-Positive total and subscale scores and the constructs of interest were in the expected directions, and revealed meaningful differences across the different DERS-Positive subscales. As anticipated, the DERS-Positive total and subscale scores were significantly positively associated with the DERS total score and significantly negatively associated with the NMR score. As for the correlations between the DERS-Positive subscales and the other constructs of interest, the DERS-Positive Nonacceptance subscale was positively associated with emotional neglect and negatively associated with emotional expressivity; the DERS-Positive Goals subscale was positively associated with positive emotional intensity/reactivity, negative emotional expressiveness within the family, experiential avoidance, and dissociation; and the DERS-Positive Impulse subscale was positively associated with positive emotional intensity/reactivity, experiential avoidance, and dissociation, and negatively associated with emotional expressivity. Finally,

the DERS-Positive total score was positively associated with positive emotional intensity/reactivity, experiential avoidance, and dissociation.

The differential patterns of significant correlations between the four DERS-Positive subscales and the constructs of interests also provided evidence for the discriminant validity of the subscales. With regard to the impulse and nonacceptance scales (the most highly intercorrelated subscales), several patterns of significance were found to differ, including correlations with the PBI Neglect scale, the AIM Positive subscale, the AAQ, and the DES. Further, regarding the goals and impulse subscales, the significance of several correlations with the constructs of interest also differed, including the EES and the SEFQ Negative subscale. Finally, regarding the goals and nonacceptance subscales (the least highly intercorrelated subscales), differential patterns of significant correlations were found for the EES, the SEFQ Negative subscale, the AIM Positive subscale, the PBI Neglect scale, the AAQ, and the DES. Taken together, these findings provide support for the discriminant validity of the four DERS-Positive subscales.

Discussion

The goal of this study was to contribute to the growing body of literature on emotion regulation difficulties by developing and validating a measure of clinically-relevant difficulties in the regulation of positive emotions in particular (DERS-Positive). Indeed, despite growing awareness of the centrality of emotion regulation to both adaptive functioning and psychopathology (Calkins, 1994; Cole, Michel, & Teti, 1994; Gratz & Tull, 2010), as well as a steady increase in research in this area, the majority of the literature on difficulties in emotion regulation has focused on the regulation of negative emotions in particular. Nonetheless, emerging research on the impulsivity dimension of positive urgency (Cyders & Smith, 2007, 2008b) highlights the relevance of deficits in the regulation of positive emotions to a variety of clinical difficulties. Moreover, research on emotion regulation more broadly suggests that individuals may experience dysregulation of both positive and negative emotions. Thus, this study sought to advance research in this area by developing a comprehensive measure of maladaptive responses to positive emotions.

The results of this study provide preliminary support for the utility and validity of the DERS-Positive in the assessment of difficulties in the regulation of positive emotional experiences. Specifically, and consistent with research on emotion regulation difficulties involving negative emotions (Gratz & Roemer, 2004; Gratz & Tull, 2010), results revealed the presence of three separate (albeit related) dimensions of positive emotion regulation difficulties, including (1) nonacceptance of positive emotions, (2) difficulties engaging in goal-directed behavior when experiencing positive emotions, and (3) difficulties controlling behaviors when experiencing positive emotions. These findings highlight the importance of assessing responses to positive emotions beyond simply the ability to inhibit impulsive behaviors in their presence, including nonaccepting responses and the ability to engage in desired behaviors when experiencing positive emotions. Indeed, results of the EFA suggest that the ability to act in desired ways and refrain from acting in undesired ways when experiencing positive emotions may be different skills.

Likewise, and consistent with the multidimensional conceptualization of emotion regulation difficulties on which this measure is based, the DERS-Positive subscales evidenced differential associations with relevant emotional and behavioral constructs. Specifically, greater overall difficulties in regulating positive emotions and the specific dimensions of difficulties engaging in goal-directed behavior when experiencing positive emotions and difficulties controlling behaviors when experiencing positive emotions were associated with greater difficulties regulating negative emotions, greater intensity/reactivity of positive emotions, and greater use of maladaptive emotion regulation strategies (in the form of experiential avoidance and dissociation). Furthermore, overall difficulties in regulating positive emotions and difficulties controlling behavior when experiencing positive emotions were negatively correlated with emotional expressivity, and difficulties engaging in goal-directed behavior when experiencing positive emotions was positively associated with the expression of negative emotions within the family context (a construct akin to expressed emotion and considered to be a risk factor for emotional dysfunction). Finally, greater nonacceptance of positive emotions was associated with greater difficulties regulating negative emotions, greater emotional neglect, and lower levels of general emotional expressivity. Taken together, these findings provide preliminary evidence for the validity of the DERS-Positive total and subscales scores.

Results of the present study have important research and clinical implications. Although previous research has examined the role of behavioral dyscontrol in response to positive emotions in a variety of clinical difficulties (see Cyders & Smith, 2007, 2008b for reviews), the lack of a psychometrically sound, comprehensive measure of difficulties in the regulation of positive emotions has been a limitation of the existing literature, interfering with the systematic progression of research in this area. The availability of such a measure is expected to facilitate both future research and the aggregation of results across studies. In addition to advancing research, a comprehensive measure of difficulties in the regulation of positive emotional experiences may inform assessment and intervention efforts in clinical settings as well. Indeed, despite growing evidence for the clinical relevance of difficulties regulating positive emotional experiences, this aspect of emotion dysregulation is often overlooked in clinical settings, where the difficulties associated with deficits in the regulation of negative emotions are often emphasized and considered most pressing. However, together with emerging research on other maladaptive responses to positive emotions, the results of this study suggest that difficulties in the regulation of positive emotions may be clinically-relevant as well, and associated with a number of clinical difficulties. Thus, development of a brief, empirically-supported multidimensional measure of these difficulties may facilitate the recognition and assessment of positive emotion regulation deficits in clinical settings. This, in turn, may have important treatment implications, highlighting the potential utility of interventions that target these difficulties.

For example, distress tolerance skills (most notably found in Dialectical Behavioral Therapy [DBT]; Linehan, 1993), which focus on decreasing impulsive behaviors in the context of heightened emotional arousal, may be useful in promoting impulse and behavioral control when experiencing intense positive emotions (consistent with the DERS-Positive Impulse dimension). Likewise, mindfulness skills focused on observing emotions without judgment or evaluation (e.g., evaluating those experiences as “good” or “bad”) may facilitate

acceptance of both negative and positive emotions (consistent with the DERS-Positive Nonacceptance dimension). Finally, interventions focused on promoting emotional willingness (i.e., an openness to experiencing emotions as they arise without trying to alter their form, intensity, or duration) in the service of valued actions (e.g., strategies from Acceptance and Commitment Therapy; Hayes et al., 1999) may facilitate engagement in goal-directed behaviors in the context of positive emotions (consistent with the DERS-Positive Goals dimension). Future research would also benefit from examining the effects of treatments targeting emotion regulation more broadly (e.g., DBT [Linehan, 1993]; Emotion Regulation Group Therapy [Gratz & Gunderson, 2006; Gratz & Tull, 2011]) on difficulties regulating positive emotions.

Despite providing promising preliminary support for the psychometric properties of the DERS-Positive, several limitations of this study must be considered. First, although this study examined aspects of both the reliability (i.e., internal consistency) and validity (i.e., construct validity) of the DERS-Positive, a comprehensive evaluation of the psychometric properties of this measure was not possible. Therefore, future research is needed to investigate other aspects of the reliability and validity of the DERS-Positive, including its: (a) test-retest reliability over one to three months; (b) discriminant validity with respect to other measures of emotion regulation difficulties across positive and negative emotions; (c) construct validity with other measures of positive emotional responding and responses to positive emotions, including positive urgency on the UPPS-P (Cyders et al., 2007; which had not been developed at the time the DERS-Positive was developed); and (d) predictive validity with regard to clinically relevant maladaptive behaviors and psychiatric difficulties that have been theoretically- and empirically-linked to deficits in emotion regulation (e.g., deliberate self-harm [Gratz & Roemer, 2008; Gratz & Tull, 2010], risky behaviors [Cyders & Smith, 2008b; Weiss et al., 2012], and borderline personality disorder [Gratz et al., 2006; Linehan, 1993]). Relatedly, the items of the DERS-Positive focus specifically on the emotional state of happiness. Although there are other positive affective states that may contribute to emotion dysregulation, this approach is consistent with other measures of positive emotion regulation difficulties such as the positive urgency subscale of the UPPS-P (Cyders et al.), for which the majority of the items focus on the emotion of happiness or positive mood more broadly.

Second, this study relied exclusively on self-report measures, responses to which may be influenced by an individual's willingness and/or ability to report accurately. Future research would benefit from the inclusion of behavioral and laboratory measures of emotion regulation and related constructs, including in vivo assessments of emotion regulation strategies in response to positive emotion inductions and behavioral and physiological measures of emotion regulation difficulties (e.g., Gratz et al., 2006; Thayer & Lane, 2000). Third, given findings of significant gender differences in levels of some of the DERS-Positive dimensions, future research is needed to examine whether the factor structure of the DERS-Positive, and the relations among these dimensions and relevant emotional and behavioral constructs, differ as a function of gender.

Finally, the generalizability of these findings to clinical populations remains unclear and the psychometric properties and factor structure of this measure in relevant clinical samples

(e.g., individuals with borderline personality disorder [Linehan, 1993] and panic disorder [Tull, 2006]) need to be examined. Nonetheless, providing some support for the generalizability of these findings to diverse nonclinical populations, it is important to note that the university from which the sample was drawn is a diverse urban university that draws heavily from the community and attracts a large number of older, nontraditional, and first-generation college students (consistent with the demographics of this sample). Thus, this sample may more accurately be conceptualized as a high-functioning community sample (rather than a typical college sample). Nevertheless, replication of these findings within diverse clinical and nonclinical samples is necessary.

Despite these limitations, findings of this study add to the literature on emotion dysregulation, providing preliminary support for a multidimensional measure of difficulties in the regulation of positive emotional experiences. Consistent with other measures of emotion regulation difficulties (Cyders et al., 2007; Gratz & Roemer, 2004), the DERS-Positive is expected to have both research and clinical utility across a range of populations. Specifically, in addition to the potential clinical utility of this measure noted above, use of the DERS-Positive in research with nonclinical populations may elucidate key processes underlying the development and maintenance of difficulties in the regulation of positive emotions (for a review of the utility of analogue samples in research, see Tull, Bornovalova, Patterson, Hopko, & Lejuez, 2008), as well as identify individuals at-risk for later psychological difficulties and maladaptive behaviors.

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References

- Anestis MD, Selby EA, Joiner TE. The role of urgency in maladaptive behaviors. *Behaviour Research and Therapy*. 2007; 45:3018–3029. [PubMed: 17923108]
- Anestis MD, Smith AR, Fink EL, Joiner TE. Dysregulated eating and distress: Examining the specific role of urgency in a clinical sample. *Cognitive Therapy and Research*. 2009; 33:390–397.
- Beblo T, Fernando S, Klocke S, Gripenstroh J, Aschenbrenner S, Driessen M. Increased suppression of negative and positive emotions in major depression. *Journal of Affective Disorders*. 2012; 141:474–479. [PubMed: 22483953]
- Bernstein EM, Putnam FW. Development, reliability, and validity of a dissociation scale. *Journal of Nervous & Mental Disease*. 1986; 174:727–735. [PubMed: 3783140]
- Calkins SD. Origins and outcomes of individual differences in emotional regulation. *Monographs of the Society for Research in Child Development*. 1994; 59:53–72. [PubMed: 7984167]
- Calkins SD, Johnson MC. Toddler regulation of distress to frustrating events: Temperamental and maternal correlates. *Infant Behavior and Development*. 1998; 21:379–395.
- Carlson EB, Putnam FW. An update on the dissociative experiences scale. *Dissociation*. 1993; 6:16–27.
- Catanzaro SJ, Mearns J. Measuring generalized expectancies for negative mood regulation: Initial scale development and implications. *Journal of Personality Assessment*. 1990; 54:546–563. [PubMed: 2348341]

- Chapman AL, Gratz KL, Brown MZ. Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy*. 2006; 44:371–394. [PubMed: 16446150]
- Cicchetti D, Howes PW. Developmental psychopathology in the context of the family: Illustrations from the study of child maltreatment. *Canadian Journal of Behavioural Science*. 1991; 23:257–281.
- Cole PM, Michel MK, Teti LO. The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development*. 1994; 59:73–100. [PubMed: 7984169]
- Costello AB, Osborne JW. Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*. 2005; 10:1–9.
- Cyders MA, Smith GT. Clarifying the role of personality dispositions in risk for increased gambling behavior. *Personality and Individual Differences*. 2008a; 45:503–508. [PubMed: 19088857]
- Cyders MA, Smith GT. Emotion-based dispositions to rash action: The trait of urgency. *Psychological Bulletin*. 2008b; 134:807–828. [PubMed: 18954158]
- Cyders MA, Smith GT. Mood-based rash action and its components: Positive and negative urgency. *Personality and Individual Differences*. 2007; 43:839–850.
- Cyders MA, Flory K, Rainer S, Smith GT. The role of personality dispositions to risky behavior in predicting first year college drinking. *Addiction*. 2009; 104:193–202. [PubMed: 19149813]
- Cyders MA, Smith GT, Spillane NS, Fischer S, Annus AM, Peterson C. Integration of impulsivity and positive mood to predict risky behavior: Development and validation of a measure of positive urgency. *Psychological Assessment*. 2007; 19:107–118. [PubMed: 17371126]
- Dallaire DH, Pineda AQ, Cole DA, Ciesla JA, Jacquez F, LaGrange B, Bruce AE. Relation of positive and negative parenting to children's depressive symptoms. *Journal of Clinical Child and Adolescent Psychology*. 2006; 35:313–322. [PubMed: 16597227]
- Dreisbach G, Goschke T. How positive affect modulated cognitive control: Reduced perseveration at the cost of increased distractibility. *Journal of Experimental Psychology: Learning Memory and Cognition*. 2004; 30:343–353.
- Flett GL, Blankstein KR, Obertynski M. Affect intensity, coping styles, mood regulation expectancies, and depressive symptoms. *Personality and Individual Differences*. 1996; 20:221–228.
- Flett GL, Boase P, McAndrew MP, Blankstein KB, Pliner P. Affective intensity and self-consciousness in college students. *Psychological Reports*. 1986; 58:148–150. [PubMed: 3961057]
- Forgas JP, Bower GH. Mood effects on person-perception judgments. *Journal of Personality and Social Psychology*. 1987; 53:53–60. [PubMed: 3612493]
- Fox HC, Hong KA, Sinha RR. Difficulties in emotion regulation and impulse control in recently abstinent alcoholics compared with social drinkers. *Addictive Behaviors*. 2008; 33:388–394. [PubMed: 18023295]
- Fredrickson BL, Levenson RW. Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. *Cognition and Emotion*. 1998; 12:191–220. [PubMed: 21852890]
- Fredrickson BL, Mancuso RA, Branigan C, Tugade MM. The undoing effect of positive emotions. *Motivation and Emotion*. 2000; 24:237–257. [PubMed: 21731120]
- Gratz, KL. Difficulties in Emotion Regulation Scale – Positive. Boston: University of Massachusetts; 2002. Unpublished measure
- Gratz KL, Bornovolova MA, Delany-Brumsey A, Nick B, Lejuez CW. A laboratory-based study of the relationship between childhood abuse and experiential avoidance among inner-city substance users: The role of emotional nonacceptance. *Behavior Therapy*. 2007; 38:256–268. [PubMed: 17697851]
- Gratz KL, Gunderson JG. Preliminary data on an acceptance-based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder. *Behavior Therapy*. 2006; 37:25–35. [PubMed: 16942958]
- Gratz KL, Roemer L. Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*. 2004; 26:41–54. (Erratum published December 2008, *Journal of Psychopathology and Behavioral Assessment*, 30, 315).

- Gratz KL, Roemer L. The relationship between emotion dysregulation and deliberate self-harm among female undergraduate students at an urban commuter university. *Cognitive Behaviour Therapy*. 2008; 37:14–25. [PubMed: 18365795]
- Gratz KL, Rosenthal M, Tull MT, Lejuez CW, Gunderson JG. An experimental investigation of emotion dysregulation in borderline personality disorder. *Journal of Abnormal Psychology*. 2006; 115:850–855. [PubMed: 17100543]
- Gratz, KL.; Tull, MT. Emotion regulation as a mechanism of change in acceptance-and mindfulness-based treatments. In: Baer, RA., editor. *Assessing mindfulness and acceptance: Illuminating the processes of change*. Oakland, CA: New Harbinger Publications; 2010. p. 107-134.
- Gratz KL, Tull MT. Extending research on the utility of an adjunctive emotion regulation group therapy for deliberate self-harm among women with borderline personality pathology. *Personality Disorders: Theory, Research, and Treatment*. 2011; 2:316–326.
- Gross JJ, Muñoz RF. Emotion regulation and mental health. *Clinical Psychology: Science and Practice*. 1995; 2:151–164.
- Gross J, John OP. Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*. 2003; 85:348–362. [PubMed: 12916575]
- Gross J, Levenson RW. Hiding feelings: The acute effects of inhibiting positive and negative emotions. *Journal of Abnormal Psychology*. 1997; 106:95–103. [PubMed: 9103721]
- Gross, J.; Richards, M.; John, OP. Emotion regulation in everyday life. In: Snyder, DK.; Simpson, A.; Hughes, N., editors. *Emotion regulation in couples and families: Pathways to dysfunction and health*. Washington, DC: American Psychological Association; 2006. p. 13-35.
- Gruber J, Johnson SL, Oveis C, Keltner D. Risk for mania and positive emotional responding: Too much of a good thing? *Emotion*. 2008; 8:23–33. [PubMed: 18266513]
- Halberstadt AG, Cassidy J, Stifter CA, Parke RD, Fox NA. Self-expressiveness within the family context: Psychometric support for a new measure. *Psychological Assessment*. 1995; 7:93–103.
- Hayes, SC.; Strosahl, K.; Wilson, KG. *Acceptance and Commitment Therapy: An experiential approach to behavior change*. New York, NY: Guilford Press; 1999.
- Hayes SC, Strosahl KD, Wilson KG, Bissett RT, Pistorello J, Toarmino D, ... McCurry SM. Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record*. 2004; 54:553–578.
- Hayes SC, Wilson KG, Gifford EV, Follette VM, Strosahl K. Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology*. 1996; 64:1152–1168. [PubMed: 8991302]
- Kao EM, Nagata DK, Peterson C. Explanatory style, family expressiveness, and self-esteem among Asian American and European American college students. *The Journal of Social Psychology*. 1997; 137:435–444. [PubMed: 9248358]
- Kissen M. Characterological aspects of depression in borderline patients. *Current Issues in Psychoanalytic Practice*. 1986; 2:45–63.
- Kopp C. Regulation of distress and negative emotions: A developmental view. *Developmental Psychology*. 1989; 25:343–354.
- Kring AM, Smith DA, Neale JM. Individual differences in dispositional expressiveness: The development and validation of the emotional expressivity scale. *Journal of Personality and Social Psychology*. 1994; 66:934–949. [PubMed: 8014836]
- Larsen RJ, Diener E. Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality*. 1987; 21:1–39.
- Larsen RJ, Diener E, Emmons RA. Affect intensity and reactions to daily life events. *Journal of Personality and Social Psychology*. 1986; 51:803–814.
- Linehan, MM. *Cognitive behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press; 1993.
- Linehan, MM.; Bohus, M.; Lynch, TR. Dialectical behavior therapy for pervasive emotion dysregulation: Theoretical and practical underpinnings. In: Gross, JJ., editor. *Handbook of emotion regulation*. New York, NY: The Guilford Press; 2007. p. 581-606.

- Mackinnon AJ, Henderson AS, Andrews G. The Parental Bonding Instrument: a measure of perceived or actual parental behavior? *Acta Psychiatrica Scandinavica*. 1991; 83:153–159. [PubMed: 2017914]
- Melnick SM, Hinshaw SP. Emotion regulation and parenting in AD/HD and comparison boys: Linkages with social behaviors and preference. *Journal of Abnormal Child Psychology*. 2000; 28:73–86. [PubMed: 10772351]
- Mennin DS, Heimberg RG, Turk CL, Fresco DM. Applying an emotion regulation framework to integrative approaches to generalized anxiety disorder. *Clinical Psychology: Science and Practice*. 2002; 9:85–90.
- Parker G. Parental reports of depressives: An investigation of several explanations. *Journal of Affective Disorders*. 1981; 3:131–140. [PubMed: 6454707]
- Parker GB, Lipscombe P. Influences on maternal overprotection. *British Journal of Psychiatry*. 1981; 138:303–311. [PubMed: 7272631]
- Parker G, Tupling H, Brown LB. A parental bonding instrument. *British Journal of Medical Psychology*. 1979; 52:1–10.
- Roemer L, Litz BT, Orsillo SM, Wagner AW. A preliminary investigation of the role of strategic withholding of emotions in PTSD. *Journal of Traumatic Stress*. 2001; 14:149–156.
- Salters-Pedneault K, Roemer L, Tull MT, Rucker L, Mennin DS. Evidence of broad deficits in emotion regulation associated with chronic worry and generalized anxiety disorder. *Cognitive Therapy and Research*. 2006; 30:469–480.
- Segal, ZV.; Williams, JMG.; Teasdale, JD. *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York, NY: Guilford; 2002.
- Slovic P, Finucane ML, Peters E, MacGregor DG. Risk as analysis and risk as feelings: Some thoughts about affect, reason, risk, and rationality. *Risk Analysis*. 2004; 24:311–322. [PubMed: 15078302]
- Soenke M, Hahn KS, Tull MT, Gratz KL. Exploring the relationship between childhood abuse and analogue generalized anxiety disorder: The mediating role of emotion dysregulation. *Cognitive Therapy and Research*. 2010; 34:401–412.
- Stocker CM, Richmond MK, Rhoades GK, Kiang L. Family emotional processes and adolescents' adjustment. *Social Development*. 2007; 16:310–325.
- Thayer JF, Lane RD. A model of neurovisceral integration in emotion regulation and dysregulation. *Journal of Affective Disorders*. 2000; 61:201–216. [PubMed: 11163422]
- Thompson RA. Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*. 1994; 59:25–52. [PubMed: 7984164]
- Thompson RA, Calkins SD. The double-edged sword: Emotional regulation for children at risk. *Development and Psychopathology*. 1996; 8:163–182.
- Tugade MM, Fredrickson BL. Regulation of positive emotions: Emotion regulation strategies that promote resilience. *Journal of Happiness Studies: Special Issue on Emotion Self Regulation*. 2007; 8:311–333.
- Tull MT. Expanding an anxiety sensitivity model of uncued panic attack frequency and symptom severity: The role of emotion dysregulation. *Cognitive Therapy and Research*. 2006; 30:177–184.
- Tull MT, Barrett HM, McMillan ES, Roemer L. A preliminary investigation of the relationship between emotion regulation difficulties and posttraumatic stress symptoms. *Behavior Therapy*. 2007; 38:303–313. [PubMed: 17697854]
- Tull, MT.; Bornovalova, MA.; Patterson, R.; Hopko, DR.; Lejuez, CW. Analogue research. In: McKay, D., editor. *Handbook of research methods in abnormal and clinical psychology*. Thousand Oaks, CA: Sage Publications; 2008.
- Tull MT, Weiss NH, Adams CE, Gratz KL. The contribution of emotion regulation difficulties to risky sexual behavior within a sample of patients in residential substance abuse treatment. *Addictive Behaviors*. 2012; 37:1084–1092. [PubMed: 22658304]
- Vasilev CA, Crowell SE, Beauchaine TP, Mead HK, Gatzke-Kopp LM. Correspondence between physiological and self-report measures of emotion dysregulation: A longitudinal investigation of youth with and without psychopathology. *Journal of Child Psychology and Psychiatry*. 2009; 50:1357–1364. [PubMed: 19811585]

- Wagner, AW.; Linehan, MM. Dissociative behavior. In: Follette, VM.; Ruzek, JI.; Abueg, FR., editors. Cognitive-behavioral therapies for trauma. New York, NY: Guilford; 1998. p. 191-225.
- Weinfurt KP, Bryant FB, Yarnold PR. The factor structure of the Affect Intensity Measure: In search of a measurement model. *Journal of Research in Personality*. 1994; 28:314–331.
- Weiss NH, Tull MT, Anestis MD, Gratz KL. The relative and unique contributions of emotion dysregulation and impulsivity to posttraumatic stress disorder among substance dependent inpatients. *Drug and Alcohol Dependence*. 2013; 128:45–51. [PubMed: 22917752]
- Weiss NH, Tull MT, Viana AG, Anestis MD, Gratz KL. Impulsive behaviors as an emotion regulation strategy: Examining associations between PTSD, emotion dysregulation, and impulsive behaviors among substance dependent inpatients. *Journal of Anxiety Disorders*. 2012; 26:453–458. [PubMed: 22366447]
- Williams DG. Neuroticism and extraversion in different factors of the Affect Intensity Measure. *Personality and Individual Differences*. 1989; 10:1095–1100.
- Zapolski TCB, Cyders MA, Smith GT. Positive urgency predicts illegal drug use and risky sexual behavior. *Psychology of Addictive Behaviors*. 2009; 23:348–354. [PubMed: 19586152]

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Table 1Factor Loadings for the 13 DERS-Positive Items Included in the Final Factor Analysis ($N = 360$)

Item	Factor		
	1	2	3
DERS-Positive 14	.851	.073	-.088
DERS-Positive 7	.733	-.079	.162
DERS-Positive 5	.730	-.023	.128
DERS-Positive 3	.713	.052	-.013
DERS-Positive 8	.076	.860	-.047
DERS-Positive 1	.136	.762	-.128
DERS-Positive 11	-.079	.679	.058
DERS-Positive 13	-.176	.560	.391
DERS-Positive 9	-.049	.038	.837
DERS-Positive 12	.062	.022	.705
DERS-Positive 15	.256	-.002	.623
DERS-Positive 6	.167	.060	.604
DERS-Positive 4	.282	-.078	.472

Note. Items loading on each factor are bolded.

Table 2
Eigenvalues and Percentage of Variance Accounted for by the Three Factors in the Final Factor Analysis ($N = 360$)

Factor	<u>Initial Eigenvalues</u>		<u>Extraction Sums of Squared Loadings</u>		<u>Rotation Sums of Squared Loadings</u>	
	Total	% Variance	Total	% Variance	Total	Total
1	6.26	48.14	5.87	45.17	4.61	
2	1.85	14.19	1.45	11.14	3.65	
3	0.90	6.91	0.51	3.95	5.08	

Table 3

Factors and Associated Items for the DERS-Positive

Factor	Item
1: Nonacceptance of Positive Emotions (NONACCEPTANCE)	14) When I'm happy, I feel guilty for feeling that way.
	7) When I'm happy, I become scared and fearful of those feelings.
	5) When I'm happy, I feel ashamed with myself for feeling that way.
	3) When I'm happy, I become angry with myself for feeling that way.
2: Difficulties Engaging in Goal-Directed Behavior when Experiencing Positive Emotions (GOALS)	8) When I'm happy, I have difficulty concentrating.
	1) When I'm happy, I have difficulty focusing on other things.
	11) When I'm happy, I have difficulty thinking about anything else.
3: Difficulties Controlling Behaviors when Experiencing Positive Emotions (IMPULSE)	13) When I'm happy, I have difficulty getting work done.
	9) When I'm happy, I have difficulty controlling my behaviors.
	12) When I'm happy, I feel out of control.
	15) When I'm happy, I lose control over my behaviors.
	6) When I'm happy, I become out of control.
	4) When I'm happy, I worry that I will lose control.

Table 4
Internal Consistency, Descriptive Statistics, and Gender Comparisons for DERS-Positive Total Scale and Subscales ($N = 360$)

	α	All Participants ($N = 360$)		Women ($N = 262$)		Men ($N = 98$)		t
		M	SD	M	SD	M	SD	
NONACCEPTANCE	.87	4.59	1.85	4.42	1.58	5.05	2.37	$t_{(130.94)} = 2.46^*$
GOALS	.83	6.75	2.92	6.69	2.90	6.89	2.98	$t_{(358)} = 0.56$
IMPULSE	.86	6.28	2.69	6.07	2.49	6.84	3.12	$t_{(145.51)} = 2.20^*$
TOTAL	.90	17.62	6.20	17.18	5.83	18.78	6.99	$t_{(150.39)} = 2.02^*$

Note. t -tests examine differences in mean scores on the DERS-Positive scales between women and men.

* $p < .05$.

Table 5Correlations among DERS-Positive Scales and Constructs of Interest ($N = 360$)

Measure	DERS-Positive NONACCEPTANCE	DERS-Positive GOALS	DERS-Positive IMPULSE	DERS-Positive TOTAL
DERS Total ^a	.28 ***	.28 ***	.29 ***	.34 ***
NMR Total	-.24 ***	-.19 ***	-.21 ***	-.25 ***
EES	-.15 **	.04.	-.12 *	-.08.
SEFQ Positive	-.10.	.07	-.01	-.00
SEFQ Negative	-.03	.18 ***	.03	.09
AIM Positive	-.06	.19 ***	.11 *	.12 *
AIM Negative	-.03	.09	.01	.04
PBI Neglect	.12 *	-.02	.08	.06
AAQ	.06	.12 *	.16 **	.15 **
DES ^c	.08	.17 **	.16 **	.17 **

Note. DERS = Difficulties in Emotion Regulation Scale; NMR = Generalized Expectancy for Negative Mood Regulation Scale; AIM = Affect Intensity Measure; EES = Emotional Expressivity Scale; AAQ = Acceptance and Action Questionnaire; SEFQ = Self-Expressiveness in the Family Questionnaire; DES = Dissociative Experiences Scale; PBI Neglect = Parental Bonding Index – Emotional Neglect.

^a $N = 354$.

^b $N = 353$.

^c $N = 358$.

 $p < .001$;

**
 $p < .01$;

*
 $p < .05$.