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Interpersonal Emotion Regulation Questionnaire (IERQ): Scale Development and Psychometric Characteristics

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Abstract

Despite the popularity of emotion regulation in the contemporary literature, research has almost exclusively focused on only *intrapersonal* processes, whereas much less attention has been placed in *interpersonal* emotion regulation processes. In order to encourage research on interpersonal emotion regulation, we present a series of 4 studies to develop the Interpersonal Emotion Regulation Questionnaire (IERQ). The final scale consists of 20 items with 4 factors containing 5 items each. The 4 factors are: *Enhancing Positive Affect; Perspective Taking; Soothing*; and *Social Modeling*. The scale shows excellent psychometric characteristics. Implications for future research are discussed.

Keywords

Emotion; emotion regulation; interpersonal; anxiety; depression; mood; classification

Emotion regulation has become a popular research topic in contemporary psychology. Thompson (1994), who was one of the early pioneers, defined emotion regulation as "*extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals*" (p. 27–28). This early definition recognizes that emotions can be modified not only intra-personally (intrinsic) through self-regulation strategies, but also inter-personally (extrinsic) processes involving other people. However, throughout the years, emotion regulation has primarily examined the intra-personal aspects of emotion regulation.

Gross (2002) defines emotion regulation as the process by which people influence which emotions they have, when they have them, and how they experience and express these emotions. Accordingly, this intrapersonal emotion regulation model assumes that emotions can be regulated at various stages in the process of emotion generation, which includes selection of the situation, modification of the situation, deployment of attention,

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modification of cognitive appraisal, and modulation of responses. The strategies are distinguished into *response-focused* and *antecedent-focused* strategies, depending on the timing during the process that generates an emotion. Antecedent-focused emotion regulation strategies occur before the emotional response has been fully activated and include tactics such as situation modification, attention deployment, and cognitive reframing of a situation; whereas suppression is a response-focused emotion regulation strategy that entails attempts to alter the expression or experience of emotions after response tendencies have been initiated. Results of empirical investigations have so far converged to suggest that antecedent-focused strategies are relatively effective methods of regulating emotion *in the short-term*, whereas response-focused strategies tend to be counterproductive in laboratory experiments (e.g., Gross & John, 2003). Moreover, studies with clinical or clinical analogue populations suggest that certain emotion regulation strategies are associated with emotional disorders (for review, see Aldao, Nolen-Hoeksema, & Schweizer, 2010, and especially anxiety disorders (e.g., Amstadter, 2008; Cisler, Olatunji, Feldner, & Forsyth, 2010; Hofmann, Sawyer, Fang, & Asnaani, 2012; Mennin, Heimberg, Turk, & Fresco, 2005).

In contrast to intra-personal emotion regulation, much less attention has been paid to inter-personal emotion regulation, despite its theoretical importance and evidence from the developmental literature. In fact, emotion regulation is a fundamental aspect of human socialization when a child learns to respond based on other people's inner states rather than to the outward behaviors and learns to relate the present self to the past self as well as the future self (Higgins & Pittman, 2008). This process is largely influenced by the caregivers' verbal and nonverbal reactions to the child's emotions, and parents' expression and discussion of emotion (Eisenberg, Spinrad, & Eggum, 2010; Posner & Rothbart, 2000). As executive functioning further develops over time, emotion regulation becomes more intentional and effortful (Derryberry & Rothbart, 1997). Later in life, emotion regulation receives increasing influence through the peer context (Lunkenheimer, Shields, & Cortina, 2007; Morris, Silk, Steinberg, Myers, & Robinson, 2007). Adult attachment relationships often mirror infant–caregiver bond, possibly because of the potential evolutionary advantages of pair bonding (Fraley & Shaver, 2000; Shaver & Mikulincer, 2007). Consequently, adults typically experience negative affect when being socially isolated, whereas social bonding and affiliation are associated with positive affect (Coan, 2010). In sum, inter-personal factors are essential in emotion regulation, because emotion regulation develops within a social context and continue to include social relations throughout life.

Furthermore, interpersonal emotion regulation bears some resemblance to other interpersonal processes, such as social support (Marroquin, 2011). Social support refers to a broader social concept related to the exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient (Shumaker & Brownell, 1984). In contrast, interpersonal emotion regulation, as we understand it, is a narrower construct that refers to the interpersonal context in which a person's emotions are regulated by others (Hofmann, 2014). Available instruments assessing social support fail to accurately represent interpersonal emotion regulation (e.g., Zimet, Dahlem, Zimet, & Farley, 1988). Measures, such as the Multidimensional Scale of Perceived Social Support assess specific characteristics and resources of social support, such as family, friends, significant others, as opposed to the interpersonal processes underlying emotion

regulation (Zimet et al., 1988). Thus, there exists a clear need for a psychometrically well-validated instrument that measures interpersonal emotion regulation itself rather than related constructs

Despite its centrality for emotion regulation, investigators have only recently begun to examine the interpersonal aspects of this process in adults (Dixon-Gordon, Bernecker, & Christensen, 2015). Zaki and Williams (2013) presented a framework of interpersonal emotion regulation that distinguishes *intrinsic* vs. *extrinsic* and *response-independent* vs. *response-dependent* interpersonal emotion regulation strategies. *Intrinsic interpersonal regulation* refers to the process when one person's emotions are regulated by recruiting the help of another person. In contrast, *extrinsic emotion regulation* is the process in which one person regulates other people's emotions. These processes can be either *response-dependent* or *response-independent*. They are *response-dependent* if the processes rely on a particular response by another person, whereas they are response-independent if they do not require that the interaction partner responds in any particular way (or may not be able to do so). This model was recently adopted to an interpersonal model of emotion regulation of anxiety and mood disorders (Hofmann, 2014).

The most significant obstacle for future work in this field is rooted in the dearth of instruments to measure the construct. So far, only one instrument exists that measures a related construct (Niven, Totterdell, Stride, & Holman, 2011). This particular scale, the *Emotion Regulation of Others and Self* (EROS), was created to measure *intrinsic* (if the target is one's own affect) and *extrinsic* regulation strategies (if the target is the other person's affect) in order to either improve or worsen affect. Accordingly, the authors hypothesized that regulation strategies can be *intrinsic affect-improving* (to deliberately improve one's own feelings), *intrinsic affect-worsening* (to deliberately worsen one's own feelings), *extrinsic affect-improving* (to deliberately improve another person's affect) and *extrinsic affect-worsening* (to deliberately worsen another person's affect). The scale construction was relatively arbitrary and based on the authors' two by two framework of extrinsic vs. intrinsic and affect improving vs. worsening. As acknowledged by the authors, the empirical evidence for the affect-worsening dimensions is relatively weak. Indeed, it is difficult to imagine circumstances when people attempt to deliberately make themselves feel worse. Not surprisingly, the affect-worsening items in both subscales suffered from low endorsement. Furthermore, no relationships were found between the affect-improving factors and people's levels of affect, questioning the validity of those items. Examining the wording of the items suggests that extrinsic affect worsening items are essentially identical to criticizing others (e.g., "I told someone about their shortcomings to try to make them feel worse"), whereas the intrinsic affect worsening items essentially measure the degree of negative self-perception (e.g., "I thought about my short comings").

The goal of this study was to develop a brief, valid, and reliable self-report questionnaire to measure interpersonal emotion regulation. Although we were mindful of the existing models of interpersonal emotion regulation, we began with a qualitative data analytic approach to generate items and to construct a model. In addition, while much of the existing research on interpersonal emotion regulation has examined how individuals regulate others' emotions (Netzer, Van Kleef & Tamir, 2015; Niven, Totterdell, & Holman, 2009; Niven et al., 2011)

we chose to focus on the regulation of one's own emotions through the use of others. Thus, the overarching question we pursued was: *How do people utilize others to regulate their own emotions?* It should be noted that interpersonal emotion regulation, as defined here, focuses on how one's emotions are regulated by others without one's own efforts to elicit that regulation. Because interpersonal emotion regulation may be particularly relevant for individuals with maladaptive emotion regulation, such as individuals with anxiety and depression, we will examine how interpersonal emotion regulation is associated with symptoms of emotional disorders. However, this measure is created and validated based on non-clinical samples.

Study 1: Item Generation

Methods of Study 1

To generate items for the questionnaire, a qualitative study was conducted in which participants were asked a series of open-ended questions about the way they used others to regulate their emotions. We chose to use participants' responses as the initial basis for item generation in order to avoid imposing preconceived theoretical restrictions on the types of interpersonal ER strategies that would form the scale. Specifically, participants responded to the following questions:

1) What are your reasons for looking to other people to deal with your emotions?

2) When you are upset (e.g. angry, anxious) and want to calm down, in what ways do you look to other people to help you do this?

3) When you are feeling down (e.g. sad, depressed), in what ways do you look to other people to help you feel better?

4) When you are feeling especially positive (e.g. joyful, happy), what are your reasons for sharing these feelings with other people?

Each participant's responses were broken down in to individual strategies or reasons for using others to regulate emotions that could be adapted to form items. Items were then eliminated if they were redundant or did not describe an interpersonal emotion regulation strategy (e.g. "I usually don't look to others to regulate my emotions"). In addition, items were revised as necessary to make them appropriately concise and to fit the grammatical structure of the scale. The item editing process was conducted by the second and third authors, who are masters-level graduate students in consultation with the first author, who is an expert in emotion research. The first author resolved any disagreements about item inclusion and language, and reviewed and edited the final list of items. Because this was an iterative process that often required frequent discussions about specific item examples, it was not possible to calculate a Kappa coefficient

The study team chose by consensus a specific emotion from the general circumplex model of affect (e.g., Posner, Russell & Peterson, 2005) that was deemed to best fit each interpersonal ER strategy (i.e. the emotion that the strategy would most likely be used in response to). Finally, the study team included additional items to tab emotions from the circumplex model to the item pool.

We reviewed the responses of 102 participants recruited through Amazon's Mechanical Turk (MTurk), which is an online crowdsourcing website in which respondents can volunteer to complete tasks such as completing surveys for compensation. We included attention checks to ensure that participants legitimately completed this and all subsequent MTurk studies. Participants received $0.50 as remuneration for completing this study and were required to have a hit-approval-rate of at least 95%. Demographic information for the sample is shown in Table 1.

Results of Study 1

A total of 429 individual reasons or strategies for regulating emotions interpersonally were identified (99 from question 1, 98 from question 2, 101 from question 3, 131 from question 4), 157 of which were determined to be sufficiently unique and appropriate for consideration in the scale. Because the item total was still rather high and there were a number of distinct items that described highly similar ER strategies, two independent judges (the second and third author) conducted another round of item elimination, which resulted in a list of 105 items for the next step.

Summary and Discussion of Study 1

Using a qualitative data analytic approach, our goal was to generate items that reflect typical strategies of interpersonal emotion regulation. By asking participants open-ended questions about the ways they use others to regulate their emotions, we generated a list of 105 items. We adopted the circumplex model of affect (Posner, Russell & Peterson, 2005) to describe and define emotions. Different items were formulated to reflect emotions with different levels of valence and arousal.

Study 2: Initial Exploratory Factor Analysis

Methods of Study 2

In the next step of scale construction, we examined the factor structure of the 105 items generated in Study 1 with the goal to identify items for the final scale. We recruited 1,014 participants through MTurk to complete the first version of the Interpersonal ER scale (following the common practice of having approximately 10 participants per item; Costello & Osborne, 2005). Participants marked how true each statement describing an interpersonal ER strategy was for them on a Likert scale ranging from 1 ("not true for me at all") to 5 ("extremely true for me"). We decided not to reverse-score items, because negatively and positive-phrased items often load on separate factors as a methodological artifact. Furthermore, there is no reason to assume that the items of the IERQ are subject to a strong response bias.

Exploratory factor analysis with maximum likelihood estimation and promax (oblique) rotation was conducted using SPSS version 20, following the guidelines of Costello & Osborne (2005). The most appropriate factor solution was determined by combination of the scree test (Cattell 1966), the Kaiser-Guttman rule (i.e., number of factors with Eigenvalues > 1), strength of parameter estimates (i.e., factor loadings > .40) and the interpretability of each factor.

Results of Study 2

The initial results of the EFA revealed just two interpretable factors, with one factor containing the majority of items describing regulation of negative emotions, and the second factor containing items with exclusively positive emotions. To avoid a valence artifact (i.e., all negative items tend to load on the same scale when combined with positive items), we re-ran the EFA with only negative emotion items (81 total items). Seven factors had Eigenvalues of greater than one; however, no items had a primary loading on the seventh factor. Moreover, the five factor solution produced the most interpretable factors. This solution accounted for 61.4% of the variance of the indicators.

Consistent with Costello and Osborne (2005), we then eliminated items with low primary factor loadings (<.40) or high cross loadings (>.32), so as to re-examine the factor structure and loadings of the item pool with poorly behaved items removed. We also reduced the number of items in each factor to a maximum of 10 by selecting those with the greatest factor loadings in order to maximize the utility of the scale. The EFA run with the 48 remaining items again indicated a five-factor solution based on the number of Eigenvalues greater than 1. Eigenvalues for the unreduced correlation matrix were 25.9, 2.1, 1.3, 1.2 and 1.1, and the variance explained by each factor was 52.8%, 4.2%, 2.6%, 2.4% and 2.3%, respectively, with 64.4% of variance in the indicators explained by the factors together. The interpersonal ER strategies captured by these factors were identified as the seeking of *Soothing* (20 items; factor loadings .38–.82), *Perspective Taking* (8 items; factor loadings .45–.75), *Downregulating Anger* (11 items; factor loadings .40–.68) *Emotional Clarification* (6 items; factor loadings .41–.69), and *Social Modeling* (3 items; factor loadings .42–.44).

Based on these results, we made a number of other adjustments to the scale prior to the next round of data collection. Each of the five factors was again reduced to the 10 items with the strongest factor loadings so as to even the length of the factors and reduce the length of the full scale. Several items with strong cross-loadings (>.32) or relatively weak primary loadings (<.50) were re-written in an attempt to better align them conceptually with their primary factor. Furthermore, additional items were written for the *Perspective Taking*, *Emotional Clarification* and *Social Modeling* factors as needed to create 10 items per factor, with an emphasis on face validity. Finally, based on our initial intent to include items that asked about the interpersonal regulation of positive emotions (thereby maximizing the scale's content validity), we added 10 positive emotion items from our original item pool to create what we hypothesized to be a sixth factor, namely *Enhancing Positive Affect*.

Summary and Discussion of Study 2

Eliminating items from the initial item pool resulted in a 60-item, six factor scale to be used in the next round of analysis.

Study 3: Exploratory and Confirmatory Factor Analyses

Methods of Study 3

For Study 3, 563 participants were recruited through MTurk (approximately 10 participants per item). Demographic information is displayed in Table 1. A final exploratory factor

analysis was conducted on the previously created 60-item version of the scale using the procedures described in Study 2. Furthermore, a confirmatory factor analysis was conducted to determine goodness of model fit. We assessed fit using four different fit indices. The chi-square statistic ($\chi 2$) can be construed such that smaller values correspond to better fit. Because this fit index is especially sensitive to sample size and overly stringent, however, three additional fit indices were examined. The non-normed fit index (NNFI) and the Comparative Fit Index (CFI) were utilized as they exact a penalty for adding parameters, which is not the case with the more lax Normed Fit Index (NFI). Also, the Root Mean Square Error of Approximation (RMSEA) is a measure based on the non-centrality parameter. NNFI and CFI values greater than .95 and greater than .90 indicate good and acceptable model fit, respectively, and values less than .10 indicate adequate model fit for RMSEA, with values around .06 indicating good or excellent fit (Browne & Cudeck 1993; Hu & Bentler, 1999). Modification indices were examined to determine the presence of local areas of model strain, and model modifications were pursued only if warranted by substantive considerations. The CFA was conducted with a latent variable analyses software in R (Lavaan) using maximum likelihood estimation (Rosseel, 2012).

Results of Study 3

Results of the EFA indicated that the *Emotional Clarification* and *Downregulating Anger* factors performed poorly, as the presence of substantial cross-loadings decreased the number of items unique to each factor. Therefore, these items were eliminated, and an additional EFA was conducted, which indicated a four-factor structure. In order to keep the scale brief, we then selected the five items with the highest loadings from each factor for the final scale. Factor loadings for the EFA conducted with the items selected for the final scale are displayed in Table 2. All factor loadings were significant and strong in magnitude, supporting a four factor solution. Eigenvalues for the unreduced correlation matrix were 8.9, 2.4, 1.3, and 1.0, and the variance explained by each factor was 44.9%, 12.0%, 6.5%, and 5.0%, respectively, with 68.4% of variance in the indicators explained by the factors together. All factors exhibited good internal consistency: *Enhancing Positive Affect* (α = .87), *Perspective Taking* (α = .85), *Soothing* (α = .89), and *Social Modeling* (α = .91). Furthermore, results from the pattern matrix indicated no salient cross loadings, which support a congeneric solution. Results of the CFA suggested excellent model fit for the four factor solution. Although the chi-square statistic was significant (χ^2 (164) = 343.12, $p < .001$), the other indices indicated excellent global fit: CFI = 0.97, NNFI = 0.97, RMSEA = 0.04 (90 % confidence interval: 0.04 to 0.05). All standardized factor loadings were significant, ranging from 0.65 to 0.84 (Figure 1). Examination of the modification indices revealed no local areas of model strain that could be justified by substantive considerations.

Summary and Discussion of Study 3

Results of the second EFA indicated that factor loadings and eigenvalues were significant and strong in magnitude, supporting a four factor solution for our finalized 20-item scale. Each of the four factors demonstrated good internal consistency. Moreover, the CFA generally supported the 4-factor solution, which exhibited overall good fit and no local areas of model strain.

Study 4: Convergent and Discriminant Validity

Methods of Study 4

In Study 4, we examined convergent and discriminant validity of the new scale. We recruited 99 participants through MTurk. Demographic information is displayed in Table 1. Specifically, we examined the relationship between subscale scores of the new scale, the *Interpersonal Emotion Regulation Questionnaire (IERQ)* and measures of intra-personal emotion regulation, depression, trait anxiety, social anxiety, coping styles, emotional intelligence, attachment style, and the EROS, which captures aspects of intra- and interpersonal emotion regulation. The final IERQ can be found in Appendix I.

We hypothesized that each of these IERQ subscales would be moderately associated with the extrinsic affect-improving subscale of the EROS, as both measures capture the construct of interpersonal emotion regulation but with different targets of regulation (one's own emotions in the IERQ and another's in the EROS). Given that intra- and interpersonal emotion regulation share the goal of changing the intensity or type of emotion being experienced, we also expected the IERQ subscales to be related to the measures of intra-personal emotion regulation, but modestly so as the IERQ aims to measure a conceptually different form of regulating emotion. Similarly, we expected the IERQ to be related to but distinct from coping style and attachment style. We did not make specific predictions related to the relationship of the IERQ with anxiety and depression, as the qualitative approach toward scale construction made it such that we did not have preconceived notions about the adaptability or lack thereof of certain interpersonal emotion regulation strategies. In addition, greater use of potentially adaptive regulation strategies could reflect a greater need to use others to improve one's emotional state resulting from greater levels of anxiety and depression, and not simply an adaptive or maladaptive response to related emotions. We did, however, expect that individuals with higher levels of emotional intelligence would be better able to and therefore would more frequently use others to regulation their emotions, thus having higher scores on the IERQ.

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relevant constructs, we also examined the associations between subscales of the IERQ with symptom measures. Prior literature suggests that some interpersonal processes (e.g., receipt of social support) are inversely associated with mental health outcomes (Bolger, Zuckerman, & Kessler, 2000). Receiving social support might prompt the receiver to believe that he is ineffective at regulating his own emotions and, thereby, increase distress. Thus, it might be possible to observe a positive relationship between interpersonal emotion regulation and symptom measures. This explanation may also hold true for the relationship between interpersonal emotion regulation and the distress associated difficulties in intra-personal emotion regulation.

Measures

Interpersonal Emotion Regulation Questionnaire (IERQ)—The final version of the IERQ contains 20 items and four subscales. Each of the four subscales exhibited excellent internal consistency: *Enhancing Positive Affect* (α = .89), *Perspective Taking* (α = .91), *Soothing* (α = .94), and *Social Modeling* (α = .93).

Emotion Regulation of Others and Self (EROS)—The EROS (Niven et al., 2011) is a 24-item scale that measures how people differ in the strategies they use to regulate one's own and others' feelings. The scale consists of four factors: intrinsic affect-improving (the intentional improvement of one's own feelings), intrinsic affect-worsening (the intentional worsening of one's own feelings), extrinsic affect-improving (the intentional improvement of someone else's feelings), and extrinsic affect-worsening (the intentional worsening of someone else's feelings). In the current study, the subscales of the EROS exhibited excellent internal consistency (α = .89 – .93).

State-Trait Anxiety Inventory – Trait (STAI)—The Trait scale of the STAI (Spielberger & Gorsuch, 1983) is a 20-item self-report questionnaire that assesses one's general propensity toward being anxious. Respondents rate the extent to which they generally feel such things as nervousness and restlessness, worry over unimportant matters, a lack of self-confidence and other traits and tendencies associated with anxiety. The STAI has demonstrated strong internal consistency, test-retest reliability, and concurrent validity (Spielberger & Gorsuch, 1983). In the current study, the STAI exhibited excellent internal consistency (α = .93).

Center for Epidemiologic Studies – Depression Scale (CES-D)—The CES-D (Radloff, 1977) is a widely used self-report measure containing 20 items that assess depressive symptoms experienced in the previous week. Total scores range from 0 to 60, with 15 or above indicating at least mild depression. The CES-D had demonstrated strong convergent validity, internal consistency, and adequate test-retest reliability (Radloff, 1977). In the current study, the CES-D exhibited excellent internal consistency (α = .94).

Social Anxiety Questionnaire for Adults (SAQ)—The SAQ (Caballo et al., 2015) is a 30-item self-report questionnaire that assesses the level of anxiety, stress, or nervousness experienced during various social situations. The SAQ assesses five dimensions of social anxiety: 1) interactions with strangers, 2) speaking in public/talking with people in authority,

3) interactions with the opposite sex, 4) criticism and embarrassment, and 5) assertive expression of annoyance, disgust, or displeasure. Items are rated on a 5-point Likert scale ranging from 1 (no unease, stress, or nervousness) to 5 (very high or extreme unease, stress, or nervousness). The measure demonstrates excellent psychometric properties, including a strongly replicated factor structure, invariance across gender, and sound convergent validity and internal consistency. In the current study, the subscales of the SAQ exhibited excellent internal consistency (α = .89 – .93).

Emotion Regulation Questionnaire (ERQ)—The ERQ (Gross & John, 2003) is a 10-item scale that measures respondents' tendency to regulate their emotions through (1) Cognitive Reappraisal and (2) Expressive Suppression on a 7-point Likert-type scale. The ERQ has demonstrated strong psychometric properties, with a well-supported two-factor structure, good internal consistency for each subscale, and satisfactory test-retest reliability (Gross & John, 2003). In the current study, both of the ERQ subscales exhibited good internal consistency (α's = .87).

Affective Style Questionnaire (ASQ)—The ASQ (Hofmann & Kashdan, 2010) is a 20-item self-report that assesses an individual's propensity for using various styles of regulating emotions. The scale contains three subscales: Concealing, which involves habitual attempts to conceal or suppress affect; Adjusting, which describes a general ability to manage, adjust, and work with emotions as needed; and Tolerating, which signifies an accepting and tolerating attitude toward emotions. The factor structure has been replicated in two separate samples, and the ASQ has demonstrated adequate internal consistency and strong convergent validity (Hofmann & Kashdan, 2010). In the current study, the ASQ exhibited fair to excellent internal consistency (α's = .71 – .90).

Difficulties in Emotion Regulation Scale (DERS)—The DERS (Gratz & Roemer, 2004) consists of 36 items that assess six dimensions of self-regulatory difficulties: nonacceptance of emotional responses (Accept), difficulties engaging in goal-directed behavior when upset (Goals), impulse control difficulties when upset (Impulse), lack of emotional awareness (Aware), limited access to effective emotion regulation strategies (Strategies), and lack of emotional clarity (Clarity). The subscales can be added to form an overall score. The DERS has demonstrated strong predictive validity and internal consistency, and adequate test-retest reliability (Gratz & Roemer, 2004). In the current study, the subscales of the DERS exhibited fair to excellent internal consistency (α's = .74 – .95).

Revised Adult Attachment Scale – Close Relationships Version (RAAS)—The RAAS (Collins, 1996) is an 18-item self-report measure designed to assess attachment style in adults in the context of close (but not necessarily romantic) relationships. The scale has three subscales: Close, which measures the extent to which a person is comfortable with closeness and intimacy; Depend, which measures the extent to which a person feels he/she can depend on others to be available when needed; and Anxiety, which measures the extent to which a person is worried about being abandoned or unloved. The RAAS has demonstrated strong reliability and convergent validity (Collins, 1996; Graham &

Unterschute, 2015). In the current study, the RAAS subscales exhibited fair to excellent internal consistency (α = .74 – .94).

Schutte Self-Report Emotional Intelligence Test (SSEIT)—The SSEIT (Schutte et al., 1998) measures emotional intelligence using 33 items divided among four scales: emotion perception, utilizing emotions, managing self-relevant emotions, and managing others' emotions. The SSEIT has demonstrated sound psychometric properties, including strong internal consistency, test-retest reliability, and predictive and discriminant validity (Schutte et al., 1998). In the current study, the SSEIT exhibited good internal consistency (α = .88).

Brief COPE (Carver, 1997)—The Brief COPE assesses the extent to which individuals have been using various coping strategies. The scale, which is an abbreviated version of the full COPE (Carver, Scheier, & Weintraub, 1989), contains 14 subscales with two items each, for 28 total items. The subscales describe different adaptive and non-adaptive coping strategies such as Denial, Active Coping, and Behavioral Disengagement. In the current study, the subscales of the COPE exhibited poor to good internal consistency (α's = .38 – .83).

Results of Study 4

Means, standard deviations, and correlations between the IERQ subscales and the included measures and demographic variables can be seen in Table 3. Relationships between subscales of the IERQ were significant and moderate to strong (r = .54 – .79, p's < .001) indicating a high degree of relatedness among the different types of interpersonal emotion regulation strategies.

As hypothesized, the IERQ subscales showed a moderate and significant positive correlation with the *Extrinsic Affect Improving* scale of the EROS (r's = .34 – .50, p's < .001), but also showed a similar relationship with the other EROS scales. With regard to relationships with trait anxiety, depression, and social anxiety, results indicate a somewhat differential pattern for the *Enhancing Positive Affect* subscale compared to *Perspective Taking, Soothing, and Social Modeling* subscales. The latter three scales, which focus on regulating negative affect, showed small to medium strength positive relationships with depression (r's = .32 – .40, p's < .01), trait anxiety (r's = .18 – .27, p's < .10) and the different facets of social anxiety (r's = .27 – .44, p's < .05), whereas *Enhancing Positive Affect* showed no significant relationship except for with the *Assertive Expression* subscale of the SAQ.

Similarly, *Enhancing Positive Affect* showed fewer significant relationships with the subscales of the intrapersonal emotion regulation measures, including the DERS, ASQ, and ERQ, whereas *Perspective Taking, Soothing, and Social Modeling* demonstrated widespread significant positive relationships with such emotion regulation strategies and difficulties. A few of the strongest relationships were seen between *Perspective Taking* and *Nonacceptance* (r = .48, p < .001), *Impulse* (r = .50, p < .001) and *Strategies* (r = .43, p < .001) from the DERS. Those DERS factors also had strong relationships with *Soothing* (r's = .40 – .43, p's < .001) and *Social Modeling* (r's = .35 – .41, p's < .001).

The *Concealing* factor of the ASQ, the *Suppression* factor of the ERQ, and the *Awareness* factor of the DERS were notable exceptions to this pattern of positive relationships between intrapersonal emotion regulation and the IERQ, however. *Awareness* was significantly negatively associated with three of the four IERQ subscales (r's = −.21 – −.34, $p < .05$), *Suppression* was unrelated to each of IERQ subscales, and *Concealing* was only weakly related to the *Perspective* subscale.

Consistent with our hypotheses, all four IERQ subscales were significantly related to emotional intelligence as measured by the SSEIT (r's = .39 – .50, p's < .001). With regard to attachment style, only the Anxiety subscale of the RAAS showed significant relationships with IERQ subscales (r's = .25 – .42, p's < .05). As for coping, the IERQ subscales showed consistently significant positive relationships with some, but not all of the coping styles. Specifically, *Denial* (r's = .26 – .61, p's < .01), *Instrumental Support* (r's = .36 – .52, p's < .01), *Venting* (r's = .35 – .43, p's < .01) and *Positive Reframing* (r's = .24 – .35; p's < .05) showed significant correlations with all of the IERQ subscales, whereas *Self-Distraction, Humor, Acceptance and Religion* were completely unrelated to the IERQ. The strongest relationships between IERQ subscales and strategies from the COPE were seen between *Perspective Taking* and *Denial* (r = .61, $p < .001$) and *Soothing and Instrumental Support* (r = .52, $p < .001$). Age was inversely and significantly associated with all of the subscales of the IERQ except the *Enhancing Positive Affect* (r's = −.24 – −.28, p's < .05). Furthermore, there was a positive and significant association between *Enhancing Positive Affect* and the Assertive Expression subscale of the SAQ (r = 0.29, $p < .01$).

To examine whether the subscales of the IERQ are spuriously related to the other interpersonal emotion regulation scales of the EROS due to the relationships with emotional distress and attachment style, we complemented the correlational analyses with a series of multiple regression analyses. These analyses were conducted to determine whether the IERQ subscales are uniquely related to the EROS Intrinsic Affect Improving subscale, which most closely resembles the constructs measured by the IERQ. The results indicated that each subscale of the IERQ is uniquely associated with intrinsic affect improvement after controlling for anxious attachment style and symptoms of anxiety and depression (Table 4).

Summary and Discussion of Study 4

Overall, the IERQ showed good convergent and discriminant validity, with modest relationships with other measures of emotion regulation, emotional intelligence, anxiety and depression, and certain coping styles. Results provided some evidence that the *Enhancing Positive Affect* subscale has differential relations with such measures compared to the *Perspective Taking, Soothing, and Social Modeling* subscales from the IERQ, which focus on regulating negative emotion.

General Discussion

In contrast to intrapersonal emotion regulation, much less in known about interpersonal emotion regulation (i.e., strategies people use to regulate their own emotions through others). The dearth of research in interpersonal emotion regulation is somewhat surprising given the link between emotions and early attachment relationships. In fact, it could be

argued that what begins as the regulation of basic physiological needs *via* expressed emotions gradually transforms into emotion regulation (Hofer, 2006). Therefore, emotion regulation is closely linked with interpersonal factors from early in development.

Throughout development, a person develops strategies to regulate the self and one's emotions. Inadequate regulation strategies can lead to emotional distress. The current pattern of results is consistent with prior literature suggesting a positive relationship between interpersonal processes, such as social support, and adverse mental health outcomes (Bolger, Zuckerman, & Kessler, 2000). It may be the case that interpersonal emotion regulation leads to greater symptom levels, because individuals regard the receipt of help as an indication that they are ineffective at coping on their own. On the other hand, it has been shown that social support is an important general predictor of psychological health. Social support refers to the psychological and material resources that are needed to reinforce a person's ability to cope with stress (Cohen, 2004). Perceived loneliness and social isolation, an extreme expression of low social support, is a strong predictor of emotional health, especially depression (Cacioppo & Hawkley, 2003; Cacioppo, Hawkley, & Thisted, 2010; Joiner, 1997). In contrast, social support serves as an important buffer of psychological stress, contributing to resilience in the face of adversities. The nature of social support can be instrumental (e.g., material things), informational (e.g., guidance to facilitate coping or problem solving), and emotional (e.g., empathy). Perceived social support appears to be more important than received (enacted) social support for emotional health (Haber, Cohen, Lucas, & Baltes, 2007; Lakey, Orehek, Hain, & VanVleet, 2010), such as depression (e.g., Stice, Ragan, & Randall, 2004; Travis, Lyness, Shields, King, & Cox, 2004). However, the mechanism through which social support affects emotional well-being is not well understood. It has been proposed that interpersonal emotion regulation might serve as a proximal mechanism through which social support affects emotional well-being (Marroquin, 2011). One important limitation in the literature is the dearth of a useful, reliable, and valid self-report instrument to measure interpersonal emotion regulation.

In a series of 4 studies, we developed the Interpersonal Emotion Regulation Questionnaire (IERQ). The final scale consists of 4 factors with 5 items defining each factor. The 4 factors are: *Enhancing Positive Affect*, which describes a tendency to seek out others to increase feelings of happiness and joy; *Perspective Taking*, which involves the use of others to be reminded not to worry and that others have it worse; *Soothing*, which consists of seeking out others for comfort and sympathy; and *Social Modeling*, which involves looking to others to see how they might cope with a given situation. The questionnaire shows excellent psychometric properties with high Cronbach alpha coefficients for all subscales (α's between .89 and .94).

A strength of this study is that the initial item pool was empirically derived from responses by participants to open-ended questions about the way they use others to regulate emotions. Thus items were not limited by a priori theories on how such emotion regulation occurs. Unsurprisingly, the derived factors did not match onto any of the theoretical models of interpersonal emotion regulation, including the recently proposed framework by Zaki and Williams (2013), which distinguished *intrinsic* vs. *extrinsic* and *response-independent* vs. *response-dependent* interpersonal emotion regulation strategies. This is not overly

surprising, because the goal of the present study was to derive an instrument that examines the ways in which a person uses others to regulate his/her own emotions. In other words, we limited the items to only *intrinsic interpersonal regulation*, which refers to the process when one person's emotions are regulated by recruiting the help of other people. The IERQ scales also do not neatly fall into either *response-dependent* or *response-independent* strategies. Rather each of the four IERQ scales combines *response-dependent* and *response-independent* strategies, because the processes sometimes do and sometimes do not rely on a particular response by another person. Similarly, by focusing on intrinsic interpersonal regulation, the IERQ shows little overlap with the EROS. Together with the moderate and expected correlations with intrapersonal emotion regulation measures, emotional intelligence and instruments of depression and anxiety, the results point to the unique contribution the IERQ makes to the field of emotion regulation. Due to the construction of the IERQ, the instrument appears to be a unique scale that does not duplicate any existing measures.

The relationships of IERQ subscales with existing measures also provide some insight in to the nature of interpersonal emotion regulation as measured by the IERQ. With regard to the relationship with intra-personal emotion regulation style, for instance, the IERQ demonstrated the strongest and most consistent relationships with the *Tolerating* subscale of the ASQ. This may reflect that a more accepting attitude toward affect and its expression would make someone more willing to reach out to others for help regulating their emotions. On the other hand, self-reported difficulty with regulating emotions, as measured by the DERS, was also consistently associated with greater use of interpersonal emotion regulation strategies, specifically those that focused on negative affect (*Perspective, Soothing* and *Social Modeling*). Trait anxiety, depression, social anxiety and an anxious attachment style each exhibited similar relationships. It may be that individuals who experience more negative affect look to others more frequently to regulate their emotions. Overall, however, the results of the correlational analyses suggest that the IERQ subscales measure constructs different from intra-personal emotion regulation, emotional distress, and symptoms for depression and anxiety. Future research could investigate the relative adaptiveness or lack thereof of the different interpersonal emotion strategies measured by the IERQ to tease apart this relationship with depressive and anxious symptomology.

Extending emotion regulation to include interpersonal processes offers an interesting transdiagnostic perspective of emotional disorders. Furthermore, it considers the broader (social) context of an individual's behavior and emotional experience. Despite these advantages, this scale and the underlying interpersonal model of emotion regulation show a number of limitations. First and foremost, we used MTurk samples to develop and validate the instrument. Although this population is now frequently used in psychological research, it is possible that certain selection biases might have contributed to the results. Second, although there was a modest representation of different racial and ethnic groups, the sample was majority White, and it is important to consider the influence of the cultural context, because interpersonal emotion regulation strategies are directly related to social standards and expectations. Third, the sample size is limited to relatively healthy participants. Future studies should examine this scale in patients with emotional disorders. Fourth, all measurements for this study relied on self-report data. An important future direction for this

research would be to investigate the extent to which the IERQ predicts interpersonal behavior in the context of emotion induction procedures. Finally, it remains unknown how interpersonal and intrapersonal emotion regulation strategies interact, and the relative importance of these groups of strategies combined are unexplored. Moreover, future studies should control for affect intensity or a proxy thereof and reexamine the association between IERQ subscales and other ER measures. Despite these limitations, we believe that the IERQ is a valuable instrument that adds to the burgeoning literature of emotion and emotion regulation.

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Appendix I

Interpersonal Emotion Regulation Questionnaire (IERQ) Items and Scoring

Below is a list of statements that describe how people use others to regulate their emotions. Please read each statement and then circle the number next to it to indicate how much this is true for you by using a scale from 1 (not true for me at all) to 5 (extremely true for me). Please do this for each statement. There are no right or wrong answers. **1----------2----------3----------4----------5** **not true for me at all** **a little bit** **moderately** **quite a bit** **extremely true for me**	
1. It makes me feel better to learn how others dealt with their emotions.	1—2—3—4—5
2. It helps me deal with my depressed mood when others point out that	1—2—3—4—5

things aren't as bad as they seem.	
3. I like being around others when I'm excited to share my joy.	1—2—3—4—5
4. I look for other people to offer me compassion when I'm upset.	1—2—3—4—5
5. Hearing another person's thoughts on how to handle things helps me when I am worried.	1—2—3—4—5
6. Being in the presence of certain other people feels good when I'm elated.	1—2—3—4—5
7. Having people remind me that others are worse off helps me when I'm upset.	1—2—3—4—5
8. I like being in the presence of others when I feel positive because it magnifies the good feeling.	1—2—3—4—5
9. Feeling upset often causes me to seek out others who will express sympathy.	1—2—3—4—5
10. When I am upset, others make me feel better by making me realize that things could be a lot worse.	1—2—3—4—5
11. Seeing how others would handle the same situation helps me when I am frustrated.	1—2—3—4—5
12. I look to others for comfort when I feel upset.	1—2—3—4—5
13. Because happiness is contagious, I seek out other people when I'm happy.	1—2—3—4—5
14. When I am annoyed, others can soothe me by telling me not to worry.	1—2—3—4—5
15. When I'm sad, it helps me to hear how others have dealt with similar feelings.	1—2—3—4—5
16. I look to other people when I feel depressed just to know that I am loved.	1—2—3—4—5
17. Having people telling me not to worry can calm me down when I am anxious.	1—2—3—4—5
18. When I feel elated, I seek out other people to make them happy.	1—2—3—4—5
19. When I feel sad, I seek out others for consolation.	1—2—3—4—5
20. If I'm upset, I like knowing what other people would do if they were in my situation.	1—2—3—4—5

Scoring instructions: All items are forward scored. *Enhancing Positive Affect* = Sum of items 3, 6, 8, 13, 18; *Perspective Taking* = Sum of items 2, 7, 10, 14, 17; *Soothing* = Sum of items 4, 9, 12, 16, 19; *Social Modeling* = Sum of items 1, 5, 11, 15, 20

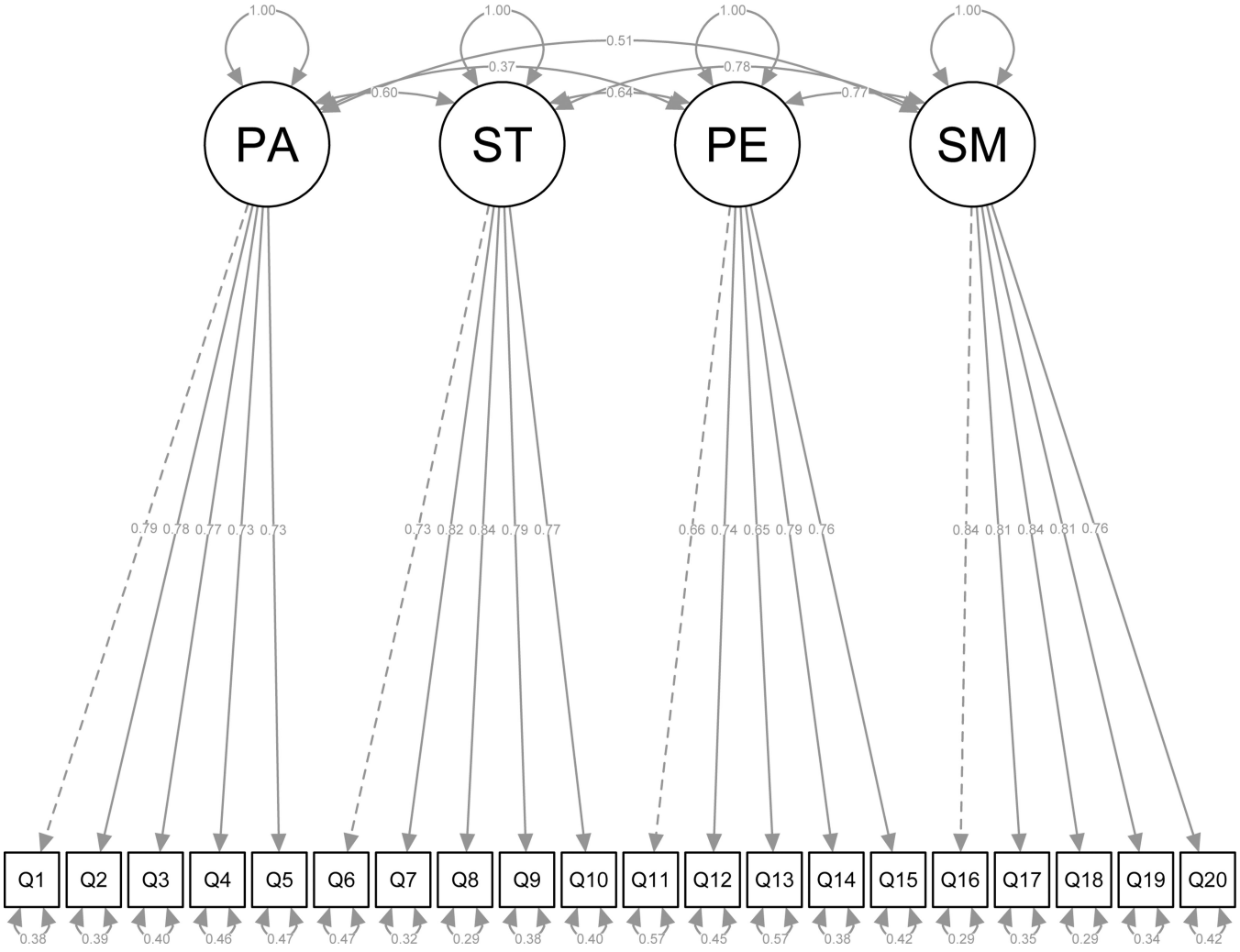

Figure 1.

The CFA solution is depicted with standardized values. PA = Enhancing Positive Affect; ST = Soothing; PE = Perspective Taking; SM = Social Modeling.

Table 1

Demographic Information for Each Study Sample

	Study 1	Study 2	Study 3	Study 4
Sample Size	102	1014	563	99
Mean Age (SD)	38.1 (11.6)	NA[1]	33.7 (10.9)	36.65 (11.8)
Gender (% Female)	48	52.6	50.9	53.5
Race/Ethnicity (%)				
White	71.6	56.5	48.0	69.7
Asian	10.8	29.1	36.7	10.1
African-American	7.8	6.2	4.3	4.0
Native American Indian	1.0	1.1	1.8	0
Latino	5.9	5.3	6.4	11.1
Other	2.9	1.5	1.6	3.0
Relationship Status (%)				
Single	46.1	36.2	33.2	30.3
Unmarried Committed Relationship	13.7	14.7	12.9	16.2
Married	27.5	41.9	47.1	43.4
Divorced or Separated	12.7	6.2	5.9	8.1
Education (%)				
High School Graduate	5.9	8.1	6.7	9.1
Trade School/ Vocational Training	12.7	4.8	5.7	9.1
Some College	35.3	24.2	18.1	25.3
College Graduate	38.2	46.1	44.8	44.4
Postgraduate Degree	7.8	16.1	23.8	12.1

[1] Due to an administrative error, participant age was not collected for study 2

Table 2

EFA Factor Loadings

	Factor			
	1	2	3	4
Because happiness is contagious, I seek out other people when I'm happy.	**.802**	.066	−.074	.017
When I feel elated, I seek out other people to make them happy.	**.776**	.085	.021	−.073
I like being in the presence of others when I feel positive because it magnifies the good feeling.	**.755**	.002	−.005	.034
I like being around others when I'm excited to share my joy.	**.745**	−.066	.054	−.030
Being in the presence of certain other people feels good when I'm elated.	**.721**	−.120	.034	.054
Having people remind me that others are worse off helps me when I'm upset.	−.080	**.736**	.035	−.057
Having people telling me not to worry can calm me down when I am anxious.	−.009	**.732**	−.014	.036
It helps me deal with my depressed mood when others point out that things aren't as bad as they seem.	.018	**.717**	.038	−.094
When I am upset, others make me feel better by making me realize that things could be a lot worse.	.038	**.698**	.012	.090
When I am annoyed, others can soothe me by telling me not to worry.	.012	**.539**	−.010	.266
I look to others for comfort when I feel upset.	.027	−.016	**.814**	.014
I look for other people to offer me compassion when I'm upset.	−.032	.045	**.795**	−.082
When I feel sad, I seek out others for consolation.	.009	.060	**.762**	.049
Feeling upset often causes me to seek out others who will express sympathy.	−.038	−.021	**.683**	.177
I look to other people when I feel depressed just to know that I am loved.	.127	.009	**.674**	.019
If I'm upset, I like knowing what other people would do if they were in my situation.	−.095	−.032	.070	**.868**
It makes me feel better to learn how others dealt with Their emotions.	.062	.041	−.073	**.804**
When I'm sad, it helps me to hear how others have dealt With similar feelings.	−.010	.004	.081	**.782**
Seeing how others would handle the same situation helps me when I am frustrated.	.034	.125	−.037	**.727**
Hearing another person's thoughts on how to handle things helps me when I am worried.	.045	−.019	.111	**.665**

Note: The factor loadings reflect values from the pattern matrix. Bolded coefficients denote primary factor loadings. Factor 1 = *Enhancing Positive Affect*; Factor 2 = *Perspective Taking*; Factor 3 = *Soothing*; Factor 4 = *Social Modeling*.

Table 3

Correlations between IERQ and other self-report measures

Variable	*Mean*	*SD*	Enhancing Pos. Affect	Perspective Taking	Soothing	Social Modeling
Demographic Characteristics						
Gender	–	–	.01	−.19	.01	−.03
Age	36.64	11.8	−.18	−.28**	−.24*	−.27**
Interpersonal Emotion regulation						
IERQ						
Enhancing Pos. Affect	17.77	4.11	1	.54**	.70**	.67**
Perspective Taking	13.15	5.37	.54**	1	.68**	.75**
Soothing	14.86	5.57	.67**	.68**	1	.79**
Social Modeling	15.35	5.12	.67**	.75**	.79**	1
EROS						
Extrinsic Aff. Improving	3.63	0.86	.55**	.34**	.50**	.46**
Extrinsic Aff. Worsening	2.01	1.12	.20*	.52**	.35**	.38**
Intrinsic Aff. Improving	3.40	0.79	.53**	.57**	.49**	.55**
Intrinsic Aff. Worsening	2.09	1.14	.21*	.48**	.45**	.43**
Intrapersonal Emotion Regulation						
DERS - Total	80.21	26.70	.14	.41**	.33**	.35**
Nonaccept	14.07	7.02	.23*	.48**	.41**	.41**
Goals	14.08	5.42	.13	.18	.26**	.26*
Impulse	12.91	6.31	.21*	.50**	.43**	.39**
Awareness	14.05	4.11	−.21*	.18	−.36**	−.24*
Strategies	19.28	8.70	.18	.43**	.40**	.35**
Clarity	10.92	3.89	.06	.36**	.19	.35**
ASQ						
Concealing	25.22	7.16	.04	.23*	.02	.11
Adjusting	22.60	5.97	.19	.37**	.14	.26*

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Variable	*Mean*	*SD*	Enhancing Pos. Affect	Perspective Taking	Soothing	Social Modeling
Tolerating	16.67	3.73	.35**	.45**	.32**	.43**
ERQ						
Reappraisal	5.02	1.16	.34**	.33**	.21*	.32**
Suppression	3.94	1.49	−.09	.19	−.10	−.01
Anxiety and Depression						
CESD	31.47	14.18	.15	.40**	.36**	.32**
STAI – Trait	40.75	12.13	.09	.18	.27**	.22*
SAQ						
Speaking in Public	18.15	6.18	.15	.40**	.38**	.36**
Interacting w/Strangers	17.46	6.39	.11	.37**	.24*	.28**
Interaction w/Opp. Sex	18.10	6.17	.12	.27**	.27**	.24*
Assertive Expression	17.84	6.01	.29**	.44**	.40**	.44**
Criticism and Embarrass.	18.48	5.65	.16	.36**	.31**	.32**
Coping, Attachment and Emotional Intelligence						
RAAS						
Close	3.30	0.81	.16	.00	.07	.00
Depend	3.01	0.81	.09	.01	.03	−.02
Anxiety	2.60	1.21	.25*	.42**	.38**	.39**
SSEIT – Total	119.97	13.23	.50**	.39**	.44**	.44**
BCI						
Self-distraction	8.76	3.90	.16	.11	.09	.15
Active Coping	9.61	4.61	.23*	.04	.21*	.21*
Denial	5.18	4.15	.26**	.61**	.39**	.46**
Substance Abuse	5.03	4.13	.05	.34**	.18	.32**
Emotional Support	8.72	4.52	.21*	.17	.36**	.23*
Instrumental Support	8.40	4.24	.44**	.36**	.52**	.39**
Behav. Disengagement	5.32	4.04	.15	.28**	.24*	.25*
Venting	7.51	3.81	.37**	.35**	.36**	.43**

Variable	*Mean*	*SD*	Enhancing Pos. Affect	Perspective Taking	Soothing	Social Modeling
Positive Reframing	8.82	3.85	.30**	.27**	.24*	.35**
Planning	10.13	4.44	.21*	.11	.22*	.23*
Humor	7.53	3.99	.16	.18	.13	.19
Acceptance	9.71	4.65	.05	−.09	−.07	−.01
Religion	7.81	5.24	.11	.15	.13	.12
Self-Blame	7.35	4.92	.10	.17	.27**	.18

Note:

* $p < .05$;

** $p < .01$;

All relationships between IERQ subscales and gender reflect point-biserial correlations. IERQ = Interpersonal Emotion Regulation Scale; EROS = Emotional Regulation of Others and Self; CESD = Center for Epidemiologic Studies Depression Scale; STAI = State-Trait Anxiety Inventory for Adults; SAQ = Social Anxiety Questionnaire; DERS = Diffuculties in Emotion Regulation Scale; ASQ = Affective Style Questionnaire; ERQ = Emotion Regulation Questionnaire; BCI = Brief COPE Inventory; RAAS = Revised Adult Attachment Scale; SSEIT = Schutte Self-Report Emotional Intelligence Test.

Table 4

Hierarchical Multiple Linear Regression Models Exhibiting Incremental Validity

Outcome Variable	Predictors	R^2	Statistics			
			B	S.E.	β	*t*
Intrinsic Affect	Step 1:	.15				
Improving	Depression		.03	.01	.58	2.81**
	Anxiety		−.05	.01	−.71	−4.06***
	Anxious Attachment		.03	.10	.04	.28
	Step 2a:	Δ.27***				
	Depression		.03	.01	.56	3.28**
	Anxiety		−.04	.01	−.64	−4.29***
	Anxious Attachment		−.08	.08	−.12	−.98
	Enhance Pos. Affect		.10	.02	.54	6.53***
	Step 2b:	Δ.29***				
	Depression		.01	.01	.17	.95
	Anxiety		−.02	.01	−.36	−2.37*
	Anxious Attachment		−.09	.08	−.14	−1.09
	Perspective		.09	.01	.62	6.83***
	Step 2c:	Δ.25***				
	Depression		.02	.01	.42	2.38*
	Anxiety		−.04	.01	−.65	−4.29***
	Anxious Attachment		−.06	.09	−.09	−.65
	Soothing		.08	.01	.55	6.26***
	Step 2d:	Δ.31***				
	Depression		.03	.01	.45	2.70**
	Anxiety		−.04	.01	−.60	−4.13*
	Anxious Attachment		−.11	.08	−.17	−1.37
	Social Modeling		.09	.01	.61	7.23***

Note. Displayed are the models of interest. Each subscale of the IERQ was regressed onto intrinsic affect improving in Steps 2a to 2d after controlling for relevant covariates in Step 1. Depression = CES-D; Anxiety = STAI-T; Anxious Attachment = RAAS-Anxious.

* $p<.05$;

** $p<.01$;

*** $p<.001$. Δ= change.

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