Assessing Regulatory Emotional Self-Efficacy in Three Countries

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Abstract

The Regulatory Emotional Self-Efficacy (RESE) scale was developed to assess perceived self-efficacy in managing negative (NEG) and in expressing positive (POS) affect (G. V. Caprara & M. Gerbino, 2001). In this study of young adults, the factorial structure of the RESE scale was found to be similar in Italy, the United States, and Bolivia: In addition to a factor for POS, NEG was represented by a second-order factor of 2 different negative affects: despondency-distress (DES) and anger-irritation (ANG). Overall, there was partial invariance at both metric and scalar levels across gender and countries. Discriminant and convergent validity of the RESE scale was further examined in the Italian sample. Stronger patterns of association of POS with prosocial behavior, of ANG with low aggressive behavior problems and irritability, and of DES with low anxiety/depressive problems and shyness and high self-esteem were found.

Keywords

self-efficacy beliefs; emotional regulation; assessment

Individuals are active agents whose capacities for self-regulation allow them a vast degree of control over their experiences and life course (Bandura, 2001). Among the mechanisms of human agency, none is more pervasively influential than self-efficacy beliefs, namely, beliefs individuals hold about their capacity to exert control over the events that affect their lives (Bandura, 1997, 2001). Self-efficacy beliefs are not static traits but rather dynamic constructs that can be enhanced through mastery experiences as a result of individuals' capacities to reflect and learn from experience (Bandura, 1997). Self-efficacy beliefs influence self-regulative

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standards adopted by people, whether they think in an enabling or a debilitating manner, the amount of effort they invest, how much they persevere in the face of difficulties, and their vulnerability to stress and depression.

Different researchers have documented the longitudinal and positive relations between self-efficacy beliefs and later children and adolescents' adjustment (Bandura, Caprara, Barbaranelli, Gerbino, & Pastorelli, 2003; Bassi, Steca, Delle Fave, & Caprara, 2006; Caprara, Pastorelli, Regalia, Scabini, & Bandura, 2005; Gore, 2006; Jones & Prinz, 2005) as well as the negative relations between self-efficacy beliefs and children and adolescents' maladjustment (Bandura et al., 2003; Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001; Muris, 2002).

Self-efficacy beliefs reflect highly contextualized knowledge structures that affect appraisal processes, which, in turn, guide actions (Bandura, 1997). This view originally led to an emphasis on task specificity in the study of its various expressions across diverse situations. However, self-efficacy beliefs do not operate in isolation from one another and may generalize, at least to some degree, across activities and situations, to specific domains of individual functioning. Along this line of reasoning, the theory has recently been extended to address different self-efficacy beliefs associated with the domain of emotional regulation (Bandura et al., 2003; Caprara, 2002).

Regulatory Emotional Self-Efficacy

Social cognitive theorists, in emphasizing the generative, creative, proactive, and reflective properties of mind, have focused on the role of self-efficacy beliefs in emotion-related self-regulation, a complex process of initiating, avoiding, inhibiting, maintaining, or modulating internal feelings and different emotion-related components (i.e., physiological processes, cognition, and behavior) in the service of accomplishing one's individual adjustment (Eisenberg & Spinrad, 2004). Following the common distinction between positive and negative affect (Russell & Carroll, 1999; Watson & Tellegen, 1985), the importance for adjustment of distinct self-efficacy beliefs in overruling or modulating the expression of negative affect and impulsivity, and to appropriately experience and express positive affect, especially in difficult situations, has been considered (Bandura et al., 2003; Caprara, 2002). In fact, in the face of provocative circumstances and stressors, people who cannot sufficiently modulate their strong negative emotions may externalize negative feelings inappropriately (Eisenberg et al., 2001), such as anger and irritation (Olson, Schilling, & Bates, 1999), or may be overwhelmed by fear, anxiety, or depression (Flett, Blankstein, & Obertinsky, 1996). In contrast, experiencing positive affect can enhance cognitive functioning, buffer the perturbing effects of aversive experiences, facilitate adaptive coping (Folkman & Moskowitz, 2000), and lead to rewarding and enriching social exchanges and experiences (Fredrickson & Joiner, 2002). Despite these potential positive effects, however, expressing affection, liking, and joyfulness indiscriminately across all of the contexts can elicit negative reactions from others (Shiota, Campos, Keltner, & Hertenstein, 2004).

Although being effectively able and feeling competent are conceptually distinct, researchers have found that self-efficacy beliefs can be proxy indicators of effective performance (Bandura, 1997, for a review). Therefore, one can expect that regulatory emotional self-efficacy, through contributing to effective emotion regulation, may serve as a proxy of it. We can suppose that people differ widely in how well they manage their emotional experiences of everyday life, not only because they differ effectively in skills but also because they differ in their perceived capabilities to regulate their emotions. In fact, it is unlikely (even if possible) that people can effectively handle their affect if they do not believe themselves capable to do so, especially in taxing and perturbing situations. In addition, people's feelings of regulatory self-efficacy are

of importance in their own right because they likely contribute to individuals' psychological well-being and comfort with their emotions.

On the basis of this reasoning, we developed an instrument to assess self-efficacy in regard to emotional regulation and, in particular, perceived self-efficacy in managing negative affect in response to adversities or frustrating events and in expressing or managing positive emotions such as joy, enthusiasm, and pride (Bandura et al., 2003; Caprara & Gerbino, 2001). *Self-efficacy in managing negative affect* refers to beliefs regarding one's capability to ameliorate negative emotional states once they are aroused in response to adversity or frustrating events and to avoid being overcome by emotions such as anger, irritation, despondency, and discouragement. *Self-efficacy in expressing positive emotions* refer to beliefs in one's capability to experience or to allow oneself to express positive emotions, such as joy, enthusiasm, and pride, in response to success or pleasant events. It was expected that regulatory emotional self-efficacy beliefs, insofar as they modulate the urgency of emotions and sustain self-regulatory mechanisms (Bandura, 1997; Bandura et al., 2003), contribute to efforts to regulate impulsive tendencies and are thus related to low levels of externalizing and psychopathic problems (Eisenberg, Fabes, Guthrie, & Reiser, 2000) as well as to low levels of internalizing problems (Eisenberg et al., 2001; Garnefski, Teerds, Kraaij, Legerstee, & van den Kommer, 2004).

Some other instruments are also available for the assessment of individual differences shaping the relations between subjective experience of emotions and behavior, in particular, externalizing behavior. They assess personality traits, such as dispositional impulsivity (Whiteside & Lynam, 2001, 2003) and distress tolerance (Simons & Gaher, 2005). In contrast with regulatory emotional self-efficacy, however, the above instruments refer to less willful and voluntary control, namely, processes related to emotional reactivity, more than to effortful self-regulation processes (Derryberry & Rothbart, 1997; Eisenberg & Spinrad, 2004).

Regulatory Emotional Self-Efficacy Across Cultures

Different culturally specific guidelines regulate individual behavior and emotions, and it is thus plausible that regulatory emotional self-efficacy beliefs may vary across societies and cultures. Indeed, in the interpersonal transactions of everyday life, socio-culturally constructed expressive rules specify the conditions under which certain types of emotional displays are normative and others are deviant (Thoits, 1989). Evidence indicates that there are both variation and similarities among cultures in the emotional significance given to situations (appraisal), the manner in which emotions are conveyed from one person to another (communication), and the manner in which people deal with situations that elicit emotion (Kitayama, Markus, & Kurokawa, 2000; Markus & Kitayama, 1991; Matsumoto, 1990; Mesquita, 2001; Mesquita & Frijda, 1992; Scherer, 1997). Cultural priorities also appear to affect values with regard to specific emotions. In particular, within Western societies, it seems that Italians are more socially oriented and also express their positive emotions with greater intensity than do Canadians and the Scotts (Duncan & Grazzani-Gavazzi, 2004).

Cultural differences in emotional regulation probably influence how self-efficacy beliefs in regulating negative emotions and expressing positive emotions are developed and structured, the ways in which they are exercised, and the purpose to which they are put (Bandura, 2002). It is thus plausible to hypothesize that emotional self-efficacy beliefs may vary somewhat across societies, insofar as they require more or less emotional control and may be predicated on societal conceptions of optimal regulation (Matsumoto, 2006).

Previous Studies on Regulatory Emotional Self-Efficacy

After preliminary studies (Caprara et al. 1999), a first version of the Regulatory Emotional Self-Efficacy (RESE) scales was developed (Bandura et al., 2003; Caprara & Gerbino, 2001).

Age and gender differences in regulatory emotional self-efficacy were found in a convenience sample of the Italian population (Caprara, Caprara, & Steca, 2003). On the one hand, men appeared to enter adulthood with a more robust sense of personal efficacy in dealing with negative affect than did women, but at older ages, they exhibited a weaker sense of personal efficacy in dealing with them. On the other hand, women's sense of personal efficacy in dealing with negative affect improved from early adulthood to elderly age. Both men's and women's sense of personal efficacy in expressing positive affect declined across age groups. In other studies with adolescents and young adults, whereas self-efficacy in regulating negative emotions has been negatively related to later depression and shyness (Bandura et al., 2003; Caprara, Steca, Cervone, & Artistico, 2003), self-efficacy in expressing positive emotions has been associated with empathy and later well-being (Caprara, Steca, Gerbino, Paciello & Vecchio, 2006).

In previous psychometric studies (Caprara & Gerbino, 2001), exploratory factorial analyses (EFAs) were performed on each of the two scales (i.e., separately for self-efficacy beliefs in regard to regulating negative emotions and for self-efficacy beliefs in regard to expressing positive emotions), and a monofactorial solution was found for each scale.

What has not yet been explored is either the posited multidimensionality of the scale (in particular, whether self-efficacy for negative emotions is a monolithic construct) or the discriminant validity of self-efficacy beliefs in regulating negative affect and expressing positive affect.

Aims and Hypotheses

Building on the prior validation of the RESE scale, the present study was designed to (a) evaluate the multidimensionality of the RESE scale developed for the Italian context; (b) test the generalization of the multidimensional latent structure of the scale in another western culture (the United States) and in a country rather distant from both Italy and the United States in living conditions and traditions (Bolivia); and (c) examine the discriminant and convergent validity of the obtained subscales.

In particular, as pertains to the first aim, we explored whether separate hypothesized factors emerged for self-efficacy in expressing positive affect and in managing negative emotions and, in addition, whether more than one factor emerged for the posited dimension of self-efficacy in managing negative emotions. With respect to the second aim, we computed measurement invariance tests across gender, first separately in each country and then across cultures. With respect to gender differences, we did not have specific findings that led us to hypothesize a differential functioning of the RESE scale scores across men and women in each country.

To our knowledge, the scales have not been used in countries other than Italy, nor have other studies focused on the regulatory emotional self-efficacy across different cultures. Furthermore, no previous study on this topic has compared psychological functioning in two Western countries and one Latin American country. In particular, Bolivia is considered a developing country and has high social and ethnic complexity (more than 40 ethnic groups) that make comparison with the United States and Italy interesting. Given the relevant dearth of cross-cultural research, we cannot formulate clear hypotheses regarding differential functioning of the RESE scale scores across Italy, the United States, and Bolivia, although we can reasonably expect strong similarities across the three samples. Finally, with respect to the third aim of the present study, we hypothesized that RESE beliefs would be associated positively with adjustment and associated negatively with maladjustment.

The Present Study

Method

Participants

Italian sample: The Italian participants were 373 men and 395 women ranging in age from 18 to 22 years (M = 18.72 years; SD = 0.90) from Genzano, a residential community near Rome. The youth were from families involved in an ongoing longitudinal study in that community. The occupational socioeconomic distribution of the families of origin matched the national profile (Istituto Italiano di Statistica, 2002: 16% in professional or managerial ranks, 38% merchants or employees in various types of businesses, 15% skilled workers, 21% were unskilled workers, 8% were retired, and 2% were unemployed). Almost all participants lived with their parents and were of Italian extract. It is typical in Italy for college students who are 18 and 22 years old to live with their parents.

U.S. sample: The U.S. participants were college students (704 men, 697 women) ranging in age from 18 to 22 years (M = 18.86; SD = 1.00). They were predominantly non-Hispanic Caucasian (71%) and Hispanic (10%), with other groups accounting for 5% or less.

Bolivian sample: The Bolivian participants were college students (122 men, 179 women) ranging in age from 18 to 22 years (M = 19.49; SD = 1.46). Their socioeconomic background varied widely, depending on their geographical position: 33.6% were residents in the urban city of La Paz, and the remaining 66.4% lived in the rural area of North Yungas. Parents of the participants in the urban area were in large part bus drivers, craftsmen, public and private clerks, and local merchants. In the rural area, the majority of the families were engaged in agriculture.

Procedure—In the Italian sample, participants were invited to participate in the study by phone, and three female researchers collected all questionnaires during specially scheduled sessions in a school. In the U.S. sample, the measures were administered to students who participated in research for credit as part of a course in introductory psychology. In the Bolivian sample, scales were administered in classes in three colleges (two in the urban center and one in the rural area). An Italian researcher and at least one Bolivian researcher were available during the scale's administration in order to assure participants' comprehension of the response scales. Only Italian young adults received a small payment for their participation.

Measures—The RESE scale was administered to all samples. In addition, Italian participants completed measures of self-esteem, happiness/hedonic balance, irritability, shyness, problem behaviors, and prosocial behavior. The RESE scales used in the United States and Bolivia were translated and then back-translated by bilingual experts.

Regulatory emotional self-efficacy: Participants rated (ranging from 1 [*not well at all*] to 5 [*very well*]) their capability to manage their emotional life with the RESE (Bandura et al., 2003; Caprara & Gerbino, 2001). This scale included items on perceived capability to express positive affect (5 items) and to regulate negative affect (9 items). Items and alphas for these measures are presented later in this article. The item formulation process followed Bandura's (2006) guidelines. In particular, the items were phrased in terms of *can do* rather than *will do* and were pretested, and sufficient gradations of difficulties were built in to avoid ceiling effects.

Self-esteem: Italians rated (ranging from 1 [*strongly disagree*] to 4 [*strongly agree*]) their self-esteem on the 10-item Rosenberg (1965) scale (e.g., "I feel that I have a number of good qualities"; α = .86).

Positive and negative affect: Italian participants rated (ranging from 1 [*never/not at all*] to 5 [*always/very much*]) the intensity with which they had generally experienced positive and negative emotions on the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988; 20 items, e.g., enthusiastic, afraid, hostile; αs = .81 and .82 for positive and negative intensity, respectively).

Irritability: Italian participants rated (ranging from 1 [*completely true for me*] to 6 [*completely false for me*]) 10 items tapping their tendency to react impulsively and rudely to the slightest provocation or disagreement (Caprara et al., 1986; e.g., "I often feel like a powder keg ready to explode"; α = .85).

Shyness: Italian participants rated (ranging from 1 [*never/almost never*] to 5 [*always/almost always*]) their shyness on Cheeek and Buss's (1981) nine-item Shyness Scale (e.g., "I feel tense when I'm with people I don't know well"; α = .86).

Aggression and anxiety/depression: The Problem scales of the Youth Self Report (YSR; Achenbach, 1991) were used to measure self-reported aggression and anxiety/depression symptoms (from 0 [*not true*] to 2 [*very true or often true*]). The Aggression scale consists of 18 items (e.g., "physically attacks people" and "gets into many fights"; α = .82). The Anxiety/Depression scale consists of 15 items (e.g., "feel unhappy, sad, or depressed," α = .86).

Prosocial behavior: Italian participants rated (ranging from 1 [*never/almost never true*] to 5 [*almost always/always true*]) their prosocial behavior on a 16-item scale (Caprara, Steca, Zelli, & Capanna, 2005) that assessed their helpfulness, sharing, consoling, supportiveness, and cooperativeness (e.g., "I try to help others"; α = .93).

Analytic Approach—An EFA was used initially to assess the psychometric properties of the scale, separately for each sample. Then, to further investigate the structure of the scale, maximum likelihood confirmatory factor analyses (CFAs) were performed for each sample. Moreover, multigroup CFAs were used to test the hypotheses regarding measurement invariance across gender and countries. A model-fitting process was adopted on the basis of the review by Vandenberg and Lance (2000), as well as the suggestions of others (e.g., Chan, 2000; Little, 1997). Three models were tested: configural invariance (the same pattern of fixed and free-factor loadings was specified in each group), metric invariance (the same factor loadings for items were specified in each group), and scalar invariance (the same intercepts of like items' regressions on the latent variables were specified in each group; this basically tests differences in mean values). The most frequent additional tests are those of partial invariance at each step, and modification indices from each step were used to refine the structure models (Steenkamp & Baumgartner, 1998). Each form of invariance is nested in the previous model and involves added constraints at each step that build on previous constraints. The logic is that invariance restrictions may hold for some but not all manifest measures across populations, and relaxing invariance constraints where they do does not hold controls for partial measurement inequivalence (Vandenberg & Lance, 2000). Chi-square difference tests were performed to compare nested models (Kline, 1998). The focus was geared toward the fit model indices that were less sensitive to sample size given that obtaining a nonsignificant chi-square becomes increasingly unlikely with large sample sizes (Kline, 1998). The comparative fit index (CFI), the root-mean-square error of approximation (RMSEA) with associated confidence interval and *p* value, the standardized root-mean-square residual (SRMR), and the Akaike information criterion (AIC) (which is a helpful index when comparing models that are not nested; Tabachnick & Fidell, 2001) are reported for each model. CFI values greater than .90 were accepted (Kelloway, 1998; Kline, 1998) as well as RMSEA values lower than .07 (Browne & Cudeck, 1993) and SRMR values lower than .08 (Kelloway, 1998). For the

RMSEA, a nonsignificant *p* value means the hypothesized model is a good approximation of the population. Mplus 3.0 (Muthén & Muthén, 1998–2007) was used for CFAs. In only the Italian sample construct validity was examined by correlating RESE beliefs with some indicators of adjustment and maladjustment.

Results

EFA/Reliability—We subjected the 14 items of the RESE scale to a preliminary principal-axis factor analysis with a Promax rotation, separately for each sample. After that, we decided to take into consideration only 12 items of the RESE scale for the following analyses. We did not consider the item "How well can you show your liking toward a person to whom you are attracted?" because in our opinion, it refers to a dating situation that might not be relevant for everyone. In addition, we dropped the item "How well can you stay calm in a stressful situation?" because it is ambiguous in regard to what negative emotion it refers to. Preliminary analyses showed that this was the only item with highly inconsistent loadings across the three countries.

On the basis of eigenvalues greater than 1, there were three factors: the capability to express positive affect (POS), to manage despondency/distress (DES), and to manage anger/irritation affects (ANG) (eigenvalues for POS, DES, and ANG were 4.24, 2.30, 1.15 for the Italians; 3.48, 2.08, 1.05 for the U.S. sample; and 3.56, 2.10, 1.12 for the Bolivians). The cumulative percentages of variance explained and alphas (in parentheses) for POS, DES, and ANG were 35.32 (.85), 54.47 (.82), 64.05 (.73) for the Italians; 29.03 (.69), 46.38 (.72), 55.14 (.70) for the U.S. sample; and 29.66 (.64), 47.17 (.81), 56.51 (.68) for the Bolivians. Almost all items loaded above .30 on their respective factors and not on other factors (see Table 1).[1]

CFAs—We calculated CFAs using the sample covariance matrices to examine the factor structure in the three samples. We tested three models: a one-factor model (Model 1); a two-factor oblique model (Model 2), with the capability to manage negative feelings and the capability to express positive emotions as separate factors; and a model with a second-order negative factor, in which the two dimensions of DES and ANG were modeled as the expression of a second-order latent factor of "capability to manage negative affects," which was correlated with the POS factor (Model 3; see Table 2). In all three samples, whereas Model 1 and Model 2 provided a poor fit to the data by most standards,[2] Model 3 provided an adequate fit to the data (see Figure 1). In the Italian sample, a modification index equal to 88.65 was reported for the covariation between Error Items 10 and 11 (two indicators of the ANG factor), both of which referred to situations in which a person was wronged ("Avoid getting upset when others keep giving you a hard time" and "Get over irritation quickly for wrongs you have experienced"). The averages of the unstandardized loadings estimated for the Model 3 were 0.70 for the Italian sample, 0.62 for the U.S. sample, and 0.63 for the Bolivian sample.

We also tested a three-factor oblique solution, and it was minimally different from Model 3 in terms of goodness of fit in each country. We decided to consider the model with the second-order factor as the model that better represented the structure of the RESE scale in the three countries because conceptually it makes sense to group self-efficacy for different negative emotions (which often are grouped or related in research; e.g., Russell & Carroll, 1999; Watson & Tellegen, 1985). However, one could also view the two negative factors as separate and correlated with one another.

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[1]In the Italian sample, Item 9 loaded on two factors: 0.38 on despondency/distress factor and 0.33 on Anger/Irritation one. In further analyses, we considered Item 9 to be an anger/irritation indicator for conceptual reasons and as suggested by pattern matrices of the two other samples.
[2]One exception was in the United States, with the RMSEA = 0.069 for the two-oblique factor model.

Multigroup Factor Analyses

Gender invariance: Separately in the three samples, multigroup CFAs confirmed that the model with a second-order negative factor replicated across genders.[3] The change in overall chi-square between the configural invariance model and the metric invariance model was not significant in the Italian sample, $\Delta\chi^2(9, N = 768) = 12.97$, $p = .16$, whereas it was significant in the U.S. and in the Bolivian sample, respectively $\Delta\chi^2(9, N = 1,401) = 23.65$, $p = .005$, and, $\Delta\chi^2(9, N = 301) = 25.09$, $p = .003$, suggesting that metric invariance held across both genders in the Italian sample but not in the other two countries. The fit indices for the metric invariance model in the Italian sample were, $\chi^2(110, N = 768) = 231.99$, CFI = .96, RMSEA = .05 (.04, .06), SRMR = .05. We investigated partial metric invariance in the other two countries. We found that if the equality constraint was lifted from Item 3 in the U.S. sample and from Item 9 in the Bolivian sample, then the mean change in overall chi-square between the configural invariance model and the metric invariance model were no longer significant, suggesting at least partial metric invariance across men and women in both U.S. and Bolivian samples, respectively, $\Delta\chi^2(8, N = 1,401) = 1.24$, $p = .25$, and, $\Delta\chi^2(8, N = 301) = 13.55$, $p = .09$. The fit indices for the partial metric invariance models were, $\chi^2(112, N = 1,401) = 346.48$, CFI = .94, RMSEA = .06 (.05, .06), SRMR = .05 in the U.S. sample and, $\chi^2(112, N = 301) = 159.24$, CFI =. 94, RMSEA = .05 (.03, .07), SRMR = .07, in the Bolivian sample.

The change in overall chi-square between the metric invariance model and the scalar invariance model was not significant in the Italian sample, suggesting that scalar invariance held across men and women in the Italian sample, $\Delta\chi^2(10, N = 768) = 17.84$, $p = .06$. Partial scalar invariance was investigated in the other two countries. We left unconstrained across gender the intercepts of those items that were not metrically invariant across gender, whereas the intercepts of the other items were (initially) held invariant (Steenkamp & Baumgartner, 1998).

We found that in the Bolivian sample, the mean change in overall chi-square between the partial metric invariance model and the partial scalar invariance model was not significant, $\Delta\chi^2(9, N = 301) = 1.03$, $p = .35$. For the U.S. sample, we repeated the procedure several times to search for items that were not invariant across both genders on the basis of the modification indices, and we found that if the equality constraint was lifted from two item intercepts in each factor (Items 2 and 3 for the POS factor; Items 6 and 7 for the DES factor; and Items 9 and 12 for the ANG factor), then the mean change in overall chi-square between the partial metric invariance model and the partial scalar invariance model was no longer significant, $\Delta\chi^2(4, N = 1,401) = 7.15$, $p = .13$.

The fit indices for the scalar invariance model in the Italian sample were $\chi^2(120, N = 768) = 249.83$, CFI =. 96, RMSEA = .05 (.04, .09), SRMR = .04. The fit indices for the partial scalar invariance models were $\chi^2(116, N = 1,401) = 353.63$, CFI = .94, RMSEA = .05 (.05, .06), SRMR = .05 in the U.S. sample and, $\chi^2(121, N = 301) = 169.26$, CFI = .94, RMSEA = .05 (.03, .07), SRMR = .07 in the Bolivian sample (see Table 3 for the unstandardized values of loadings and intercepts in the second-order negative models separately for each country).

Country invariance: Multigroup CFAs indicated that the factor structure of the second-order negative factor model also replicated across countries,[4] but with some limitations. The change in overall chi-square between the configural invariance model and the metric invariance model

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[3]For the Italian sample model testing, we included the correlation between errors for Items 10 and 11 as suggested by the CFA.
[4]In order to test the invariance of the scale across Italian, U.S., and Bolivian samples, it was necessary to include the same constraints for all groups; thus, we included the correlation between the errors for Items 10 and 11 (which had been added to the Italian sample) to the other two countries even though this correlation was not significant in the U.S. and Bolivian sample (doing so had little effect on the model).

was significant, $\Delta\chi^2(18, N = 2{,}470) = 112.474$, $p < .001$, suggesting that full metric invariance may not hold across the three countries. The loadings for one item on the POS factor (Item 4) and one item on the ANG factor (Item 10) in the Italian sample were relaxed to be different from the U.S. and Bolivian samples. In addition, the loading for one item per each factor, Items 2, 8, and 9, in the Bolivian sample were relaxed to be different from the other two samples. The fit indices for the partial metric invariance model were $\chi^2(166, N = 2{,}470) = 558.897$, CFI = .95, RMSEA = .05 (.05, .06), SRMR = .05, and chi-square difference tests supported the viability of the partial metric invariance hypothesis, $\Delta\chi^2(13, N = 2{,}470) = 21.034$, $p = .07$.

We repeated the procedure to search for items that were not invariant across the three samples, based on the modification indices, several times until we obtained a model in which the chi-square difference test between the partial metric invariance model and the partial scalar invariance model were no longer significant, $\Delta\chi^2(8, N = 2{,}470) = 14.229$, $p = .08$. For the POS factor, intercepts for Items 1 and 4 in the Italian sample were relaxed to differ from the other two groups; the intercept for Item 2 in the Bolivian sample was relaxed to differ from the other two groups; and the intercept for Item 3 in the U.S. sample was relaxed to differ from the other two groups. For the DES factor, the intercepts for Items 5 and 8 were relaxed to differ across the three samples; the intercepts for Items 6 and 7 were constrained to be equal across samples. For the ANG factor, the intercepts for Items 9 and 10 were relaxed to differ across the three samples; the intercept for Item 11 was constrained to be equal across samples; the intercept for Item 12 in the U.S. sample was relaxed to differ from the other two groups. In summary, the test of scalar invariance provided evidence for partial scalar invariance only for the DES factor (see Table 4 for the unstandardized values of loadings and intercepts in the second-order negative models).

Relationships of the RESE Scale With (Mal)Adjustment Indicators in the Italian Sample—In order to examine the construct validity of the three factors of the RESE scale, we correlated each factor with self-esteem, hedonic balance (positive and negative affect), shyness, irritability, aggression and anxiety/depression problems, and prosocial behavior. All three factors were positively correlated with the indices of adjustment and negatively correlated with indices of maladjustment (see Table 5). We compared the magnitude of the correlations of the DES and ANG scores with the various indices. In comparison to ANG, DES was more negatively related to shyness and anxiety/depression and more positively related to self-esteem and positive affect. In comparison to DES, ANG was more negatively related to irritability and aggression. In comparison to DES, POS was less positively related to self-esteem and less negatively correlated with shyness. In comparison to ANG, POS was more positively related to self-esteem and positive emotionality and less negatively correlated with aggression. In comparison with both factors of self-efficacy in managing negative emotions, POS was less negatively related to negative affect, irritability, and anxiety/depression and more positively related to prosocial behavior.

Discussion and Conclusions

Building on previous studies on the psychometric properties of the RESE scale (Caprara & Gerbino, 2001), we take an additional step in the present study in understanding the internal validity of the RESE scale, demonstrating its multidimensionality and its generalization to a Western and non-Western country, the United States and Bolivia. However, the results also suggest some caution with regard to comparisons of the scales, and especially with specific items, between different countries.

Results for configural invariance confirmed the existence of two broader dimensions of self-efficacy beliefs related to positive and negative affect in the three different countries—Italy, the United States, and Bolivia. This finding is consistent with those of researchers who have

differentiated between positive and negative affect in the structure underlying affective experience (Russell & Carroll, 1999; Watson & Tellegen, 1985) as well as with the finding in previous studies of two broad dimensions of negative and positive affect in the structure underlying RESE beliefs (Bandura et al., 2003; Caprara et al., 2006). Unlike previous studies (in which EFAs were used and this proposition was not tested; Caprara & Gerbino, 2001), in the present study, negative affect represented a second-order factor of perceived capability to manage two different negative affects in the three countries: despondency-distress (DES) and anger-irritation (ANG). Indeed, EFAs and CFAs supported the two subdimensions of self-efficacy beliefs in managing negative affect, separately in each sample. Overall, in interpreting the two factors (positive and negative emotions), we also took into account the different nature of the regulatory task, beyond the structure of affective experience. Indeed, whereas *self-efficacy in regulating negative emotions* refers to abilities in containing and suppressing emotions, *self-efficacy in expressing positive emotions* refers to abilities in expressing emotions freely. These two different tasks might manifest differently in different people. For example, whereas some people might be relatively skilled at containing negative emotions but unskilled at expressing positive ones, others may feel very incapable of handling negative emotions but more capable in expressing properly the positive ones.

Results from analyses in which metric and scalar invariance across gender and countries were examined provided further useful information about the scale. With respect to cross-gender invariance, our findings suggest that, overall, the same factorial structure and pattern for the RESE scale exist across gender in each of the three examined countries. Thus, the construct and the scale would seem to be useful in diverse societies. At the intercept level, no gender differences were found in the Italian sample, and minor differences were found in the Bolivian sample. In contrast, in the U.S. sample, half of the item intercepts differed across men and women. According to Steenkamp and Baumgartner (1998), we can state that cross-gender comparison of factor means may be considered meaningful because at least one item besides the marker item had invariant intercepts in each factor of the RESE scale. Nevertheless, caution should be warranted with regard to drawing straightforward conclusions because the estimated factor mean difference may differ depending on the anchor indicators chosen for the factors (Vandenberg, 2002). Moreover, there is an unresolved question about whether a given partial invariance level is acceptable in order to make comparisons meaningful and how great a departure from full invariance is to be tolerated (Millsap & Kwok, 2004; Widaman & Reise, 1997). With respect to invariance across countries, measurement invariance between Italy, the United States, and Bolivia was only partially supported at both metric and intercept levels. Because several intercept items were not invariant across the three samples, considerable caution must be exercised in comparing mean values of the scales (or of the items) among samples from Italy, the United States, and Bolivia. Overall, examination of scalar invariance suggests that the three constructs from the RESE scale do not have exactly the same meaning across the three countries we studied.

The presence of cultural differences in intercepts of items is not surprising. Cultural differences and different social norms likely influence the way one perceives and manages affect. But the existence of country and cultural differences cannot be used as a basis to interpret the source of those differences; instead, they need to be explicated by unpacking the contents of culture and the specific psychological processes that differ across cultures and that are conceptually likely to account for the hypothesized cultural differences (Matsumoto & Yoo, 2006).

In order to further examine the validity of the scale, the discriminant and convergent validity of the three identified dimensions of the RESE scale was investigated only in the Italian sample. Perceived self-efficacy beliefs in managing negative emotions and perceived self-efficacy beliefs in expressing positive affect (POS) were correlated with both general indicators of emotionality and other adjustment and maladjustment indicators in the expected manner.

Moreover, in support of the discriminant validity of the three identified dimensions of the scale, comparison of the patterns of correlations supported stronger patterns of association of POS with positive affect and of DES and ANG with lower levels of negative emotions. Furthermore, the analyses indicated that POS was especially associated with high levels of prosocial behavior; ANG was especially associated with low aggression and low irritability; and DES was especially associated with low anxiety/depression, low shyness, high positive affect, and high self-esteem. Although limited to the Italian sample, these correlations are consistent with literature on emotional regulation and adjustment (Caspi, 2000; Eisenberg et al., 2001) and further support a model with separate POS, ANG, and DES factors rather than one with factors for only positive and negative affect.

There are several limitations to the study. First, the scale does not assess all types of negative affect. Rather, it contained items pertaining to a restricted number of negative emotions (ANG and DES) and not to self-referent negative emotions (e.g., shame, guilt, and embarrassment). Positive emotions such as love, pride, amusement, awe, contentment, and surprise were also not considered. In the future, researchers could further explore the multidimensionality of the capability to manage other self-referent negative emotions and of the capability to express positive emotions. Second, the Bolivian and U.S. samples were relatively advantaged; the findings may not generalize to U.S. and Bolivian young adults from poor families or to other ethnic groups within each country (or in other countries). Third, the results require further investigation in different samples from the United States and Bolivia. There may be important variations in the meaning of the emotions examined in Italy, the United States, and in Bolivian village life. Future studies should clarify the specific differences between Italian, U.S., and Bolivian young adults in their self-perceived and actual capabilities to manage emotions. Qualitative research should also be used to explore whether some items are more emotionally charged in one culture than in another. Fourth, it is important to note that the use of self-reports in the assessment of the indicators of adjustment/maladjustment may have introduced response biases (such as social desirability) and inflated the pattern of correlations. We also did not consider potential moderators of the identified relations between RESE and indicators of adjustment and maladjustment. One cannot exclude the possibility that self-efficacy beliefs moderate or mediate the relations between temperamental or personality traits and behavior. In addition, we did not use any related measures of emotional regulation, and the incremental values of RESE above and beyond actual emotional regulation skills is open to question. Finally, it is noteworthy to investigate whether the same pattern of correlations between the three examined dimensions of the RESE scale and indicators of adjustment and maladjustment are similar in the U.S. and Bolivian samples.

Future studies should clarify these limitations. Indeed, the availability of such an instrument might enable researchers to identify individuals' strengths and limitations in perceived capability to manage different emotions in educational and clinical settings. Furthermore, the RESE scale may also be useful for evaluation and monitoring purposes in interventions aimed to build a resilient sense of efficacy in emotional regulation.

Acknowledgments

References

Achenbach, TM. Manual for the Youth Self-Report and 1991 profile. Burlington: University of Vermont, Department of Psychiatry; 1991.

Bandura, A. Self-efficacy: The exercise of control. New York: Freeman; 1997.

Bandura A. Social cognitive theory: An agentic perspective. Annual Review of Psychology 2001;52:1–26.

Bandura A. Social cognitive theory in cultural context. Journal of Applied Psychology: An International Review 2002;51:269–290.

Bandura, A. Guide to the construction of self-efficacy scales. In: Pajares, F.; Urdan, T., editors. Self-efficacy beliefs of adolescents. Greenwich, CT: Information Age Publishing; 2006. p. 1-43.

Bandura A, Caprara GV, Barbaranelli C, Gerbino M, Pastorelli C. Role of affective self-regulatory efficacy on diverse spheres of psychosocial functioning. Child Development 2003;74:769–782. [PubMed: 12795389]

Bandura A, Caprara GV, Barbaranelli C, Pastorelli C, Regalia C. Sociocognitive self-regulatory mechanisms governing transgressive behavior. Journal of Personality and Social Psychology 2001;80:125–135. [PubMed: 11195885]

Bassi M, Steca P, Delle Fave A, Caprara GV. Academic self-efficacy beliefs and quality of experience in learning. Journal of Youth and Adolescence 2006;36:301–312.

Browne, MW.; Cudeck, R. Alternative ways of assessing model fit. In: Bollen, KA.; Long, SJ., editors. Testing structural equation models. Newbury Park, CA: Sage; 1993. p. 136-162.

Caprara, GV. Personality psychology: Filling the gap between basic processes and molar functioning. In: von Hofsten, C.; Backman, L., editors. Psychology at the turn of the millennium, Vol. 2: Social, developmental and clinical Perspectives. New York: Psychology Press and Taylor & Francis; 2002. p. 201-224.

Caprara GV, Caprara M, Steca P. Personality's correlates of adult development and aging. European Psychologist 2003;8:131–147.

Caprara, GV.; Gerbino, M. Affective perceived self-efficacy: The capacity to regulate negative affect and to express positive affect. In: Caprara, GV., editor. Self-efficacy assessment. Trento, Italy: Edizioni Erickson; 2001. p. 35-50.

Caprara GV, Pastorelli C, Regalia C, Scabini E, Bandura A. Impact of adolescents' filial self-efficacy on quality of family functioning and satisfaction. Journal of Research on Adolescence 2005;15:71–97.

Caprara GV, Renzi P, D'Augello D, D'Imperio G, Rielli G, Travaglia G. Interpolating physical exercise between instigation to aggress and aggression: The role of irritability and emotional susceptibility. Aggressive Behavior 1986;12:83–91.

Caprara GV, Scabini E, Barbaranelli C, Pastorelli C, Regalia C, Bandura A. Perceived emotional and interpersonal self-efficacy and good social functioning. Giornale Italiano di Psicologia 1999;26:769–789.

Caprara GV, Steca P, Cervone D, Artistico D. The contribution of self-efficacy beliefs to dispositional shyness: On social-cognitive systems and the development of personality dispositions. Journal of Personality 2003;71:943–970. [PubMed: 14633054]

Caprara GV, Steca P, Gerbino M, Paciello M, Vecchio G. Looking for adolescents' well-being: Self-efficacy beliefs as determinants of positive thinking and happiness. Epidemiologia e Psichiatria Sociale 2006;15:30–43. [PubMed: 16584101]

Caprara GV, Steca P, Zelli A, Capanna C. A new scale for measuring adult prosocialness. European Journal of Psychological Assessment 2005;21:77–89.

Caspi A. The child is father of the man: Personality continuities from childhood to adulthood. Journal of Personality and Social Psychology 2000;78:158–172. [PubMed: 10653512]

Chan D. Detection of differential item functioning on the Kirton adaptation-innovation inventory using multiple-group mean and covariance structure analyses. Multivariate Behavioral Research 2000;35:169–199.

Cheek JM, Buss AH. Shyness and sociability. Journal of Personality and Social Psychology 1981;41:330–339.

Derryberry D, Rothbart MK. Reactive and effortful processes in the organization of temperament. Development and Psychopathology 1997;9:633–652. [PubMed: 9448999]

Duncan E, Grazzani-Gavazzi I. Positive emotional experiences in Scottish and Italian young adults: A diary study. Journal of Happiness Study 2004;5:359–384.

Eisenberg N, Cumberland A, Spinrad TL, Fabes RA, Shepard SA, Reiser M, et al. The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. Child Development 2001;72:1112–1134. [PubMed: 11480937]

Eisenberg N, Fabes RA, Guthrie IK, Reiser M. Dispositional emotionality and regulation: Their role in predicting quality of social functioning. Journal of Personality and Social Psychology 2000;78:136–157. [PubMed: 10653511]

Eisenberg N, Spinrad TL. Emotion-related regulation: Sharpening the definition. Child Development 2004;75:334–339. [PubMed: 15056187]

Flett GL, Blankstein KR, Obertinsky M. Affect intensity, coping style, mood regulation expectancies, and depressive symptoms. Personality and Individual Differences 1996;20:221–228.

Folkman S, Moskowitz JT. Positive affect and the other side of coping. American Psychologist 2000;55:647–654. [PubMed: 10892207]

Fredrickson BL, Joiner T. Positive emotions trigger upward spirals toward emotional well-being. Psychological Science 2002;13:172–175. [PubMed: 11934003]

Garnefski N, Teerds J, Kraaij V, Legerstee J, Van den Kommer T. Cognitive emotion regulation strategies and depressive symptoms: Differences between males and females. Personality and Individual Differences 2004;36:267–276.

Gore PA. Academic self-efficacy as a predictor of college outcomes: Two incremental validity studies. Journal of Career Assessment 2006;14:92–115.

Istituto Italiano di Statistica [National Institute of Statistics]. Annuario statistico italiano 2002 [Italian yearbook of statistics 2002]. Rome: ISTAT; 2002.

Jones TL, Prinz RJ. Potential roles of parental self-efficacy in parent and child adjustment: A review. Clinical Psychology Review 2005;25:341–363. [PubMed: 15792853]

Kelloway, EK. Using LISREL for structural equation modeling: A researcher's guide. Thousand Oaks, CA: Sage; 1998.

Kitayama S, Markus HR, Kurokawa M. Culture, emotion, and well-being: Good feelings in Japan and the United States. Cognition & Emotion 2000;14:93–124.

Kline, RB. Principles and practices of structural equation modeling. New York: Guilford Press; 1998.

Little T. Mean and covariance structures (MACS) analyses of cross-cultural data: Practical and theoretical issues. Multivariate Behavioral Research 1997;32:53–76.

Markus H, Kitayama S. Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review 1991;98:224–253.

Matsumoto D. Cultural similarities and differences in display rules. Motivation and Emotion 1990;14:195–214.

Matsumoto D. Are cultural differences in emotion regulation mediated by personality traits? Journal of Cross-Cultural Psychology 2006;37:421–437.

Matsumoto D, Yoo SH. Toward a new generation of cross-cultural research. Perspectives on Psychological Science 2006;1:234–250.

Mesquita, B. Culture and emotion: Different approaches to the question. In: Mayne, TJ.; Bonnano, GA., editors. Emotions: Current issues and future directions. New York: Guilford Press; 2001. p. 214-251.

Mesquita B, Frijda NH. Cultural variations in emotions: A review. Psychological Bulletin 1992;112:179–204. [PubMed: 1454891]

Millsap RE, Kwok OM. Evaluating the impact of partial factorial invariance on selection in two populations. Psychological Methods 2004;9:93–115. [PubMed: 15053721]

Muris P. Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. Personality and Individual Differences 2002;32:337–348.

Muthén, LK.; Muthén, BO. Mplus user's guide. Los Angeles: Author; 1998–2007.

Olson SL, Schilling EM, Bates JE. Measurement of impulsivity: Construct coherence, longitudinal stability, and relationship with externalizing problems in childhood and adolescence. Journal of Abnormal Child Psychology 1999;27:151–165. [PubMed: 10400061]

Rosenberg, M. Society and the adolescent self-image. Princeton, NJ: Princeton University Press; 1965.

Russell JA, Carroll JM. On the bipolarity of positive and negative affect. Psychological Bulletin 1999;125:3–30. [PubMed: 9990843]

Scherer KR. Profiles of emotion-antecedent appraisal. Cognition & Emotion 1997;11:113–150.

Shiota, MN.; Campos, B.; Keltner, D.; Hertenstein, MJ. Positive emotion and the regulation of interpersonal relationships. In: Philippot, P.; Feldman, RS., editors. The regulation of emotion. Mahwah, NJ: Erlbaum; 2004. p. 127-155.

Simons JS, Gaher RM. The Distress Tolerance Scale: Development and validation of a self-report measure. Motivation and Emotion 2005;29:83–102.

Steenkamp JEM, Baumgartner H. Assessing measurement invariance in cross-national consumer research. Journal of Consumer Research 1998;25:78–90.

Tabachnick, BC.; Fidell, LS. Using multivariate statistics. Vol. 4th ed.. Needham Heights, MA: Allyn & Bacon; 2001.

Thoits PA. The sociology of emotions. Annual Review of Sociology 1989;15:317–342.

Vandenberg RJ. Toward a further understanding of and improvement in measurement invariance methods and procedures. Organizational Research Methods 2002;5:139–158.

Vandenberg RJ, Lance CE. A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. Organizational Research Methods 2000;2:4–69.

Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology 1988;54:1063–1070. [PubMed: 3397865]

Watson D, Tellegen A. Toward a consensual structure of mood. Psychological Bulletin 1985;98:219–235. [PubMed: 3901060]

Whiteside SP, Lynam DR. The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. Personality and Individual Differences 2001;30:669–689.

Whiteside SP, Lynam DR. Understanding the role of impulsivity in alcohol abuse: Application of the UPPS Impulsive Behavior Scale. Experimental and Clinical Psychopharmacology 2003;11:210–217. [PubMed: 12940500]

Widaman, KF.; Reise, SP. Exploring the measurement invariance of psychological instruments: Applications in the substance use domain. In: Bryant, KJ.; Windle, M.; West, SG., editors. The science of prevention: Methodological advances from alcohol and substance abuse research. Washington, DC: American Psychological Association; 1997. p. 281-324.
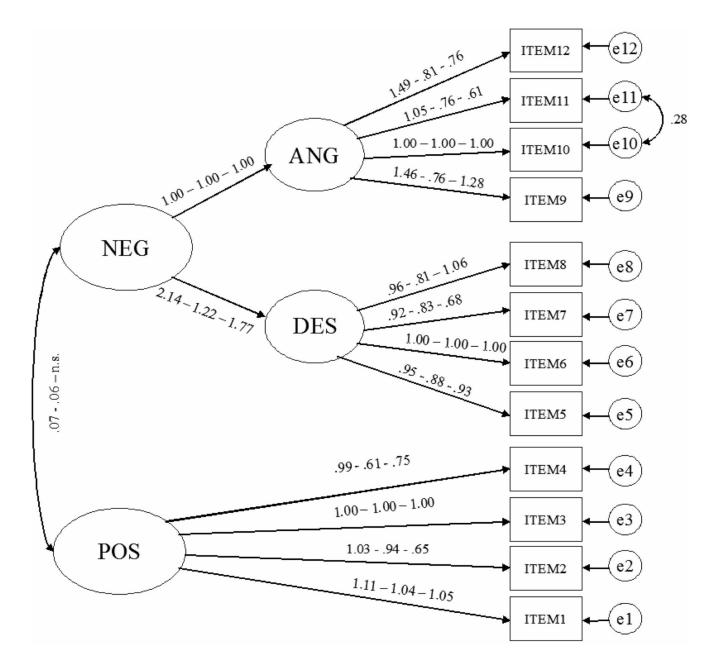
Figure 1.
Path diagram of the negative Second-Order Factor with two first-order factors and a first-order positive factor in Italy, the United States, and in Bolivia. Unstandardized factor loadings are shown on the straight arrows, whereas factors and error terms intercorrelations are shown on the curved arrows. The parameter estimates refer, respectively, to Italian, U.S., and Bolivian samples. ANG = perceived self-efficacy in managing anger/irritation; NEG = perceived self-efficacy in managing negative affect; DES = perceived self-efficacy in managing despondency/ distress; POS = perceived self-efficacy in expressing positive affect; e1–e12 represent error terms.

Table 1

RESE Item Loadings After EFA and Correlations Among the Three Factors, Separately for Each Sample

Item	Italian sample			U.S. sample			Bolivian sample		
	POS	DES	ANG	POS	DES	ANG	POS	DES	ANG
How well can you									
POS									
1. Express joy when good things happen to you?	.86	−.04	−.01	.79	−.04	.01	.68	.04	−.08
2. Feel gratified over achieving what you setout to do?	.78	−.04	.04	.75	−.01	.03	.51	−.07	.00
3. Rejoice over your successes?	.73	.09	−.05	.66	.05	.00	.63	.11	−.13
4. Express enjoyment freely at parties?	.71	−.01	.00	.30	.21	−.04	.48	−.11	.10
DES									
5. Keep from getting dejected when you are lonely?	−.01	.79	−.07	.04	.57	.00	.07	.64	.20
6. Keep from getting discouraged by strong criticism?	−.03	.74	−.01	−.02	.75	−.06	−.01	.75	−.03
7. Reduce your upset when you don't get the appreciation you feel you deserve?	−.02	.73	−.02	−.04	.44	.23	−.03	.53	.12
8. Keep from getting discouraged in the face of difficulties?	.05	.69	.04	.11	.62	−.02	.01	.90	−.13
ANG									
9. Manage negative feelings when reprimanded by your parents or significant others?	.03	.38	.33	−.03	.22	.41	−.05	.28	.53
10. Avoid getting upset when others keep giving you a hard time?	−.05	−.10	.80	−.03	.17	.59	.05	−.08	.74
11. Get over irritation quickly for wrongs you have experienced?	.06	.00	.66	−.02	.19	.41	.05	.10	.40
12. Avoid flying off the handle when you get angry?	−.02	.24	.44	.06	−.20	.78	.01	−.01	.55
Correlations among factors	POS	DES	ANG	POS	DES	ANG	POS	DES	ANG
POS	—			—			—		
DES	.37	—		.18	—		.11	—	
ANG	.13	.56	—	.10	.63	—	−.17	.59	—

Note. RESE = Regulatory Emotional Self-Efficacy; EFA = exploratory factor analysis; POS = perceived self-efficacy in expressing positive affect; DES = Perceived Self-Efficacy in managing despondency/distress. ANG = Perceived Self-Efficacy in managing anger/irritation.

Table 2

Fit Indices for Confirmatory Factor Analysis of the RESE Scale in the Italian, U.S., and Bolivian Sample

Model	χ^2	df^a	CFI	AIC	RMSEA	CI	p	SRMR
				Italian sample				
Model 1	1538.16	54	.57	21461.5	.18	(.18, .19)	<.001	.15
Model 2	452.37	53	.88	20377.7	.09	(.09, .11)	<.001	.07
Model 3	183.56	51	.96	20112.9	.06	(.05, .07)	.066	.04
				U.S. sample				
Model 1	1556.16	54	.61	41105.9	.14	(.14, .15)	<.001	.12
Model 2	46.25	53	.91	39958.1	.07	(.06, .08)	<.001	.05
Model 3	263.23	52	.95	39817.1	.05	(.05, .06)	.143	.05
				Bolivian sample				
Model 1	348.38	54	.68	8663.78	.14	(.12, .15)	<.001	.12
Model 2	171.46	53	.89	8488.86	.09	(.07, .10)	<.001	.07
Model 3	100.96	52	.95	8420.36	.06	(.04, .07)	.244	.06

Note. For each sample, Model 1 refers to one factor with 12 items; Model 2 refers to one negative factor with eight items and one positive factor with four items; Model 3 refers to one second-order factor with two first-order factors (despondency/distress and anger/irritation, each with four items) and a first-positive order factor with four items. RESE = Regulatory Emotional Self-Efficacy; CFI = comparative fit index; AIC = Akaike information criterion; RMSEA = root-mean-square error of approximation; CI = confidence interval; SRMR = standardized root-mean-square residual.

[a]For the three countries, each model indicated a significant chi-square with $p < .001$. This was likely due to the large samples sizes.

Table 3

Unstandardized Values of Loadings and Intercepts in the Second-Order Negative Model From Multigender CFAs of the RESE Scale for Each Sample

Item	Factor loadings			Intercepts		
	Italy:M-F	U.S.:M-F	Bolivia: M-F	Italy:M-F	U.S.:M-F	Bolivia:M-F
1.	1.09	1.18	.99	4.21	4.23	4.32
2.	1.02	1.00	.69	4.16	4.42–4.31	4.50
3.	1.00	.93–1.26	1.00	4.13	4.12–3.89	4.45
4.	.97	.68	.68	4.08	3.89	3.85
5.	.96	.89	.93	3.57	3.40	3.37
6.	1.00	1.00	1.00	3.45	3.51–3.41	3.50
7.	.94	.85	.66	3.52	3.43–3.55	3.67
8.	.97	.82	1.08	3.62	3.66	3.40
9.	1.34	.74	.79–1.62	3.35	3.50–3.34	3.44–3.31
10.	1.00	1.00	1.00	2.79	3.48	3.08
11.	1.05	.78	.52	3.31	3.33	3.26
12.	1.43	.86	.76	3.34	3.68–3.91	3.35

Note. One value means invariant constraints (i.e., the same factor loading/intercept held for men and women in that country). Two values indicate that the constraint was relaxed (i.e., there were different factor loadings/intercepts for men and women). CFAs = confirmatory factor analyses; RESE = Regulatory Emotional Self-Efficacy; M-F = Male-female.

Table 4

Unstandardized Values of Loadings and Intercepts in the Second-Order Negative-Factor Model Across the Three Sample Models From Multisample CFA of the RESE Scale

Item	Factor loadings				Intercepts		
	Italy	U.S.	Bolivia	Italy	U.S.	Bolivia
1.		1.07		4.33^a	4.11	4.11
2.	.98	.98	.65	4.25	4.25	4.38^a
3.		1.00		4.25	3.91^a	4.25
4.	$.97^a$	.63	.63	4.18^a	3.80	3.80
5.		.92		3.41	3.26	3.08
6.		1.00			3.28	
7.		.85			3.37	
8.	.88	.88	1.11^a	3.45	3.53	3.07
9.	1.23	1.23	1.87^a	3.19	3.31	3.07
10.	$.90^a$	1.45	1.45	2.69	3.33	2.91
11.		1.00			3.20	
12.		1.26		3.19	3.67^a	3.19

Note. CFA = confirmatory factor analysis; RESE = Regulatory Emotional Self-Efficacy.

[a]This value differed statistically from the other two in the same columns under Factor loadings or Intercepts.

Table 5

Correlations Among the Three Dimensions of the RESE Scale and Relevant Indicators of (Mal)Adjustment

Indicator	M	SD	n	DES	ANG	POS	Difference between two correlation coefficients		
							DES vs. ANG	POS vs. DES	POS vs. ANG
Self-esteem	3.26	0.50	768	.54**	.30**	.40**	**	**	**
Positive affects	3.59	0.60	749	.32**	.19**	.33**	**		**
Negative affects	2.05	0.73	742	−.35**	−.37**	−.12**		**	**
Shyness	2.26	0.76	767	−.40**	−.26**	−.30**	**	*	
Irritability	3.89	1.18	766	−.29**	−.53**	−.14**	**	**	**
Aggression	0.45	0.27	768	−.14**	−.31**	−.12**	**		**
Anxiety/Depression	0.35	0.31	763	−.44**	−.34**	−.25**	**	*	**
Prosocial Behavior	3.61	0.63	768	.12**	.19**	.38**		**	**

Note. The scores for each indicator were computed with the mean of each scale's items. Means and standard deviations (in parentheses) for DES, ANG, and POS were, respectively, 3.34 (0.72), 3.07 (0.68), and 4.25 (0.65). RESE = Regulatory Emotional Self-Efficacy; DES = perceived self-efficacy in managing despondency/distress; ANG = perceived self-efficacy in managing anger/irritation; POS = perceived self-efficacy in expressing positive affect.

*
$p < .05$.

**
$p < .01$.