

*Emotion Regulation: A Critical Review of Cross-cultural Validity of Emotion  
Suppression*

Kullaya Pisitsungkagarn, Phongmanus Busayaprateep

Chulalongkorn University, Thailand

0247

The Asian Conference on Psychology & the Behavioral Sciences 2013

Official Conference Proceedings 2013

Abstract

Investigations of emotion regulation have proliferated over the last two decades. This is due to recognition of the significance of emotion regulation in mental health and well being. Theoretical models and measures of emotion regulation have been proposed. Those proposals, however, are based on studies conducted in Western cultural contexts. With recent empirical and theoretical findings, questions have emerged regarding the cross-cultural validity of emotion regulation strategies. This paper aims to illustrate cross-cultural variations in emotion suppression. Possible explanations for this variation are offered. This critical review should aid in evaluating the generalization of research findings using measures of emotion regulation across cultures. A recommendation for utilizing and developing a culturally appropriate measure of the construct is also offered.

## **Introduction**

During the past two decades, considerable endeavors have been made to study the construct of emotion regulation. This regulation has been shown to have a profound impact on daily living (e.g., psychological adjustment, interpersonal relationships, work performance, and physical health) (Gross 1998). Additionally, ineffective emotion regulation has been identified as being of critical importance in many psychological disorders. Anxiety disorders are maintained by ineffective emotion regulation of avoidance (Barlow 2008). Additionally, the adverse effects of borderline personality disorder have been associated with poor emotion regulation (Barlow 2008). Thus, emotion regulation training is now a core component of various psychotherapeutic approaches. These include mindfulness-based cognitive therapy (Segal, Teasdale, & Williams 2002), acceptance and commitment therapy (Hayes, Kirk, & Kelly 2003), and dialectical behavior therapy (Linehan & Dimeff 2001).

In light of the significance of emotion regulation, increased efforts in research are currently being made toward the development of conceptual frameworks and assessment instruments for the construct. A key theoretical model has been proposed by Gross and John (2003). Subsequently, various measures of emotion regulation have been developed. These include the Emotion Regulation Questionnaire (ERQ; Gross & John 2003), the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski & Kraaij 2006), the Difficulties in Emotion Regulation Scale (Gratz & Roemer 2004), the Generalized Expectancy for Negative Mood Regulation Scale (Catanzaro & Mearns 1990), Emotion Regulation of Self and Others (Niven et al. 2011), and the Affective Style Questionnaire (Hofmann & Kashdan 2010). Variations exist in the characteristics of the model. These are, for example, the valence of emotion regulated (e.g., measuring exclusively positive or negative emotions or the two combined), the regulation strategies involved (e.g., cognitive or behavioral strategies), and the effectiveness of the emotion regulation measured (i.e., the effectiveness or ineffectiveness of the process).

Despite these variations, the aforementioned measures of emotion regulation have some features in common. One such feature is that they were developed within Western cultural contexts. Although some of these instruments have been translated into various languages, questions have emerged regarding their cross-cultural validity in determining various emotion-regulation strategies. This is evident with the ERQ (Gross & John 2003), which is one of the most recognized measures of the construct.

## **Objectives**

This paper aims to provide an illustration of cross-cultural variations reported in relation to the use of the ERQ. Since it is one of the most researched measures of emotion regulation, a review of its applications across cultures should pave the way for subsequent examination of such variations in other measures. The information obtained should also be beneficial in developing assessment instruments of emotion regulation for use in non-Western cultural contexts.

The current literature review will be organized to reflect the above objectives. In the next section, the theoretical foundation of the ERQ will be outlined. The use of this measure and its psychometric properties will then be reviewed, followed by its hitherto reported cross-cultural variations. Subsequently, potential factors contributing to these variations will be discussed. Finally, the implications for the use of the ERQ

as well as other assessment measures for emotion regulation across cultures will be examined.

### **Theoretical Background for the ERQ**

The ERQ was developed by Gross and John (2003), who proposed a process model of emotion regulation, and it became widely recognized. Based on this model, emotion regulation results in the enhancement of positive effects and mitigation of negative ones. Two phases, which are further divided into smaller stages of regulation, lead to these results. The first phase encompasses the first four stages and is termed antecedent-focused emotion regulation. This phase reflects the emotion-regulation processes that take place prior to the occurrence of an emotion. These include: (1) situation selection, or the individual's decisions whether to engage in or withdraw from situations that give rise to a particular emotion; (2) situation modification, or the individual's efforts to modify the situations at hand in order to affect their emotional experiences; (3) attention deployment, or the individual's decisions to choose which aspects of the situations at hand to attend to in order to affect their emotional experiences; and (4) cognitive change, or the individual's attempts to change their perspectives on the situations at hand in order to change their emotions.

The second phase of emotion regulation is termed response-focused emotion regulation (Gross & John 2003). This covers the fifth stage of this process, which reflects response modulation. This stage refers to the individual's attempts to control their responses to the emotions that have already arisen. Therefore, control may be exercised over these responses (e.g., facial expression, relevant behavior). Response-focused emotion regulation mainly involves suppressing expression of the emotion that has already been established. The regulation is sometimes termed emotion suppression.

### **The ERQ**

Gross and John's theoretical framework on emotion regulation (2003) was the basis for their development of the ERQ (Gross & John 2003), which measures individuals' abilities to regulate their emotions. The ERQ consists of 10 Likert-type items, which are divided into two subscales based on the antecedent- and response-focused phases of emotion regulation. Cognitive change is used to represent the first phase, whereas emotion suppression is employed for the latter; the two subscales that reflect this distinction are termed, respectively, reappraisal and suppression.

The reappraisal subscale consists of six items (e.g., "I control my emotions by changing the way I think about the situation I'm in," and "When I want to feel a positive emotion, I change the way I think about a situation"), and it reflects an individual's abilities to change their emotions (e.g., enhancing positive emotions or reducing negative emotions by changing their perspectives). The suppression subscale consists of four items (e.g., "When I feel positive emotions, I'm careful not to express them," and "When I feel negative emotions, I make sure not to express them"), and it captures an individual's attempts not to express their emotions, regardless of their valences. Respondents select from the seven Likert-type ratings, which range from 1 (strongly disagree) to 7 (strongly agree). According to Gross and John (2003), the higher the score a respondent obtains in a given subscale, the greater the use of the emotion-regulation strategy.

Past findings (Gross & John 2003) have demonstrated satisfactory psychometric properties of the ERQ, with Cronbach's alphas ranging from .75 to .82 for the reappraisal subscale and from .68 to .76 for the suppression subscale. Additionally, the two strategies (Gross & John 2003) lead to different psychological outcomes. Generally, cognitive reappraisal has been shown to be positively associated with factors relevant to well being (e.g., positive effects, life satisfaction, self-esteem, optimism, and psychological well being) but negatively associated with adjustment difficulties (e.g., depression, rumination, and negative effects).

Scores on the ERQ suppression subscale have been shown to be positively associated with vulnerabilities to maladjustment. These include the sense of being inauthentic and rumination as well as anxiety, stress, and depression (Amstadter 2008; Gross & John 2003). In contrast, the attempt to suppress the consequences of emotions is negatively associated with positive affects, self-esteem, life satisfaction, and psychological well being. A sense of frustration and lack of control over one's environments has been reported in relation to these outcomes. Health-wise, physiological changes of emotion suppression in cardiovascular and respiratory systems (Gross & Levenson 1993, 1997) have been posited to affect the immune system. Moreover, adverse effects of emotion suppression have been found in terms of social functioning. People oriented toward emotion suppression suffer disadvantages; they receive less favorable peer ratings (although they are *not* disliked by their peers). It has been reported that a compromised sense of authenticity and openness is experienced by people who interact with individuals that engage in emotion suppression (Butler et al. 2003). The suppression is also described in association with the avoidance of attachment, poor interpersonal coordination, and decreased feelings of rapport (Gross & John 2003). Therefore, emotion suppression is negatively associated with social support (Gross & John 2003) and the sense of affiliation (Butler et al. 2003).

### **Analysis of Cross-cultural Variations in Emotion Suppression**

As seen above, the debilitating effects of emotion suppression have been consistently reported in areas of intrapersonal adjustments, in terms of both psychological and physical health, and in interpersonal relationships. Those reports, however, were drawn from studies of Caucasian participants within a Western cultural context. Possible cross-cultural variations in emotion regulation have begun to emerge since Gross and John's introduction of the ERQ (2003). In their seminal paper, the researchers examined ethnic variations in the use of emotion suppression. Latino-, Asian-, and African-American participants were found to be significantly more oriented toward emotion suppression than European-American participants. Gross and John (2003) noted that this greater orientation was not unanticipated. However, the researchers did not elaborate on their rationale or examine whether variations also existed in the outcomes of emotion suppression across ethnic groups.

Subsequent studies have been conducted to clarify this area. Differences emerge regarding the cross-cultural implications of emotion suppression. Whereas the degree of deployment of cognitive reappraisal and its outcomes remains relatively constant across cultures (Soto, Perez, Kim, Lee, & Minnick 2011), variations exist in the orientation toward emotion suppression and its outcomes. The variations become most apparent when emotion suppression is employed within Eastern collectivistic

cultures. The distinction can be observed in relation to both intra- and interpersonal outcomes of emotion suppression.

In terms of the intrapersonal consequences of emotion suppression, Soto et al. (2011) examined the use of cognitive reappraisal and emotion suppression among Hong Kong Chinese and European-American participants. Similar associations were found between the use of cognitive appraisal and subsequent psychological adjustments (i.e., life satisfaction) between the two groups. However, the consequences of emotion suppression vary across cultures. In concurrence with the findings of Gross and John (2003), Soto et al. found emotion suppression to be associated with adjustment difficulties (i.e., negatively associated with life satisfaction but positively associated with depression) among European-American participants. However, among Hong Kong Chinese who reported greater emotion suppression, Soto et al. found these associations to be absent. Similar findings were reported by Arens, Balkir, and Barnow (2012), who studied emotion suppression among female immigrants in Germany. Turkish immigrants were selected because of the orientation toward collectivism in Turkish culture. Their findings demonstrated that participants with a Turkish cultural background engaged more in emotion suppression than German participants. Interestingly, that engagement did not lead to negative outcomes in psychological adjustment and well being. Similar findings were seen in relation to physical health. Better health outcomes were reported in relation to emotion suppression in Asian collectivistic cultures (Butler, Lee, & Gross 2009).

Likewise, at the interpersonal level, emotion suppression has been found to have less adverse outcomes among individuals oriented toward collectivism. According to a pioneering study by Butler, Lee, and Gross (2007), bicultural Asian-Americans were less affected by the negative consequences of emotion suppression than European-Americans. Among the latter, emotion suppression leads to negative emotions and self-protective goals during social interactions. In emotion suppression, European American participants became less responsive in their social interactions and were perceived by those with whom they interacted as negative and hostile. Interestingly, when bicultural Asian-American participants engaged in emotion suppression, those adverse impacts were absent. Butler et al. (2007) concluded that emotion suppression appeared to be problematic only for participants oriented toward individualism, not those oriented toward collectivism.

### **Potential Explanations for Cross-cultural Variations of Emotion Suppression**

With variations in frequency and outcomes of emotion suppression observed across cultures, cultural orientation has been identified as accounting for the different orientations and outcomes of emotion suppression. Although the exact aspect of culture that accounts for this variation has yet to be identified, two key aspects are often mentioned: cultural orientation toward collectivism and individualism and dialectical beliefs. These may be regarded as follows.

#### ***Cultural Orientation***

Cultural orientation toward collectivism and individualism has been cited as contributing to different interpretations that individuals have regarding emotion suppression. Placing a high value on personal identity and independence, those oriented toward individualism are likely to be averse to emotion suppression: engaging in it hinders their self-expression and assertiveness. Thus, individuals from

individualistic cultures are likely to perceive emotion suppression as compromising their sense of control, less satisfactory, and stress inducing. The suppression has been associated with poor adjustments, both psychologically and physically.

Similar findings have been reported related to interpersonal adjustments with emotion suppression among those oriented toward individualism: given their prime values of self-expression and assertiveness, emotion suppression is not congruent with their sense of self. The suppression is, therefore, perceived as inauthentic and involuntary (e.g., reflecting self-protection) (Butler et al. 2007). The negativity of emotion suppression is also reported by those interacting with such individuals: those partners reportedly experience suppressors as less warm and less genuine, which causes them to interact with hostility to suppressors and offer them less social support. This, in turn, perpetuates the perception of the negativity of the suppression in individualistic cultures.

In contrast, emotion suppression appears more congruent with the collectivistic goals of maintaining social harmony (Hofstede 2001; Markus & Kitayama 1991). The congruence between emotion regulation and collectivistic values of interdependence has been posited as counterbalancing the negativity of emotion suppression (Butler et al. 2003). Concealing one's emotional responses is likely to leave the individual with reduced risk in social discord through expressing negative emotions. Therefore, this emotion-regulation strategy is adaptive in fulfilling prosocial goals (Hui, Triandis, & Yee 1991) and is more acceptable in collectivistic cultures. This potentially helps to explain the reported lack of negative consequences of emotion suppression for such individuals, both psychologically and physically (Butler, Lee, & Gross 2009).

### ***Dialectical Beliefs***

In addition to the cultural dimension, cultural scripts or dialectical beliefs appear to play an important role in alleviating the negative effects of emotion suppression in collectivistic cultures (Miyamoto & Ma 2011). One dialectical belief commonly found in Asian collectivistic cultures is the concept of the “middle way” (Peng & Nisbett 1999). This, together with the concept of transience—the belief that reality, including the emotions, is constantly changing (Osella & Osella, 1999)—is likely to reduce the frustration that individuals have regarding the ineffectiveness of emotion suppression in alleviating negative emotions. Transience is likely to lead individuals to be more accepting of such emotions, viewing them as unstable and likely to change of their own accord. The necessity to change these emotions through active strategies becomes less dominant. In terms of the middle way, this balancing view is likely to leave those with Asian collectivistic values more accustomed to moderated emotions and feel more tolerant of negative emotions (Miyamoto & Ma 2011). The middle way, or the tolerance for contradiction, may also help those with Asian collectivistic values become more flexible in their employment of emotion-regulation strategies (i.e., using emotion suppression in combination with other strategies). This flexibility may help balance out the negative effects of the suppression.

The importance of flexibility is shown in a study by Bonanno, Papa, Lalande, Westphal, and Cofiman (2004). In this study, undergraduate students' abilities in emotion regulation using emotion suppression in combination with other strategies (i.e., emotion enhancement) was found to be a prospective predictor of their adjustments over the next 2 years. Those more able to both enhance and suppress their emotions achieved better adjustment. Similar findings were reported by Arens, Balkir, and Barnow (2012), who found that Turkish immigrants in Germany exhibited both greater emotion suppression and reappraisal than native German females, and they also experienced no negative outcomes of emotion suppression. The absence of this negativity was not found when the Turkish immigrants became depressed. Similar to their German counterparts, depressed immigrants were less flexible in emotion regulation and employed only emotion suppression in emotion regulation. The adverse outcomes of emotion suppression were found in those immigrants when the suppression was not used in proportion with other emotion-regulation strategies.

### **Future Directions: Enhancing the Assessment of Emotion Regulation**

As shown above, various cultural factors could contribute to cross-cultural variations in emotion regulation. Those factors include cultural values and interpreting how well emotion suppression fits one's cultural goals. Additionally, dialectical beliefs play a role and lead to different interpretations of emotion and the manner in which emotion regulation is managed. The use of assessment tools for emotion regulation should therefore take these points into consideration. It is necessary to avoid assuming negative consequences of emotion suppression without taking the cultural background into consideration. Additionally, the suppression should be viewed in conjunction with other emotion-regulation strategies (i.e., cognitive reappraisal) to enhance accuracy when interpreting its outcomes (Arens et al. 2012).

The present review indicates cross-cultural variations in emotion regulation using the example of emotion suppression. It is worth pointing out that variations emerge in other measures of emotion regulation as well. One example is an initial report by Wong (2009) of a higher orientation toward certain cognitive response patterns in the CERQ and their outcomes (Garnesfski, Kraaij, & Spinhoven 2001). Comparing data obtained from Mainland Chinese participants with those previously reported in Western literature, Zhu and colleagues (2008) reported that the Chinese participants were more oriented toward blaming (i.e., self-blaming and other-blaming) in their emotion regulation. In contrast, there was a significantly higher endorsement of planning and positive reappraisal—putting things into perspective—in the American sample. Additionally, different outcomes with the regulation patterns were found with participants from different cultures. For instance, a negative association was found between positive reappraisal (one of the more helpful response patterns) and depressive symptoms in Western studies. However, no such association was evident among Mainland Chinese participants. Subsequent findings in a more rigorously designed study by Wong (2009) confirmed those of previous investigations on different orientations toward emotion-regulation strategies between Hong Kong and North American participants.

Future studies should benefit by taking these cultural variations into consideration with regard to cross-cultural differences in emotion-regulation measures. Toward

developing a new instrument on the construct, empirical evidence should be systematically obtained for interpreting the implications of emotion suppression. Additionally, the measurement of emotion suppression should be considered within the context of other strategies and the cultural context. A new scale should take into account the characteristics of existing measures. These would include the following: (1) the valence of the emotion to be regulated; (2) the regulation processes involved; and (3) the effectiveness of the emotion regulation measured.

### Summary

The present review outlines considerations in engaging in emotion suppression across cultures with the emphasis on the orientation and outcomes of emotion suppression. Whereas past findings reported negative consequences of emotion suppression in individualistic cultures, such adverse effects are not evident in collectivistic ones. An analysis of relevant factors indicated that cultural values and dialectical beliefs lead to different interpretations of emotion suppression and greater utilization of regulation in collectivistic cultures; these factors prevent its negative outcomes. Suggestions for subsequent examination of other emotion-regulation instruments and directions for the development of relevant measures are made.

### References

- Amstadter, A 2008, 'Emotion regulation and anxiety disorders', *Anxiety Disorders*, vol. 22, pp. 211-221.
- Balkir, N, Arens, EA, Wolff, C, & Barnow, S in press, 'Exploring the influence of self construals on psychopathology in Turkish immigrant and German women with major depression', *Psychiatrische Praxis*, vol. 40, no. 3, pp. 135-145.
- Barlow, DH (ed.) 2008, *Clinical handbook of psychological disorders: A step-by-step treatment manual*, 4th ed., Guilford Press, New York.
- Barnow, S, Arens, EA, & Balkir, N 2011, 'Emotion regulation and psychopathology taking cultural influences into account. Psychotherapie in Psychiatrie', *Psychotherapeutischer Medizin und Klinischer Psychologie*, vol. 16, pp. 7-17.
- Bonanno, GA, Papa, A, Lalande, K, Westphal, M, & Coifman, K 2004, 'The importance of being flexible: The ability to enhance and suppress emotional expression as a predictor of long-term adjustment', *Psychological Science*, vol. 15, no. 7, pp. 482-487.
- Butler, EA, Egloff, B, Wilhelm, FH, Smith, NC, Erickson, EA, & Gross, JJ 2003, 'The social consequences of expressive suppression', *Emotion*, vol. 3, pp. 48-67.
- Butler, EA, Lee, TL, & Gross, JJ 2007, 'Emotion regulation and culture: Are the social consequences of emotional suppression culture-specific?', *Emotion*, vol. 7, pp. 30-48.

Butler, EA, Lee, TL, & Gross, JJ 2009, 'Does expressing your emotions raise or lower your blood pressure? The answer depends on cultural context', *Journal of Cross-Cultural Psychology*, vol. 40, pp. 510-517.

Catanzaro, SJ & Mearns, J 1990, 'Measuring generalized expectancies for negative mood regulation: Initial scale development and implications', *Journal of Personality Assessment*, vol.54, pp. 546-563.

Chentsova-Dutton, YE, Chu, JP, Tsai, JL, & Rottenberg, J 2007, 'Depression and emotional reactivity: Variation among Asian Americans of East Asian descent and European Americans', *Journal of Abnormal Psychology*, vol. 116, pp. 776-785.

Garnefski, N & Kraaij, V 2006, 'Relationships between cognitive emotion regulation strategies and depressive symptoms: A comparative study of five specific samples', *Personality and Individual Differences*, vol. 40, pp. 1659-1669.

Gratz, KL & Gunderson, JG 2006, 'Preliminary data in an acceptance based emotion regulation group intervention for deliberate self-harm among women with borderline personality disorder', *Behavior Therapy*, vol. 37, no.1, pp. 25-35.

Gross, JJ 1998, 'The emerging field of emotion regulation: An integrative review', *Review of General Psychology*, vol. 2, no. 3, pp. 271-299.

Gross, JJ & John, OP 2003, 'Individual differences in two emotion regulation process: Implications for affect, relationships, and well-being', *Journal of Personality and Social Psychology*, vol. 85, pp. 348-362.

Gross, JJ & Levenson RW 1993, 'Emotional suppression: Physiology, self-report, and expressive behavior', *Journal of Personality and Social Psychology*, vol. 64, pp. 970-986.

Gross, JJ & Levenson RW 1997, 'Hiding feelings: The acute effects of inhibiting negative and positive emotion', *Journal of Abnormal Psychology*, vol. 106, pp. 95-103.

Hayes, SC, Kirk, DS, & Kelly, GW 2003 *Acceptance and Commitment Therapy: An experiential approach to behavior change*, Guilford Press, New York.

Hofmann, SG & Kashdan, TB 2010, 'The Affective Style Questionnaire: Development and psychometric properties', *Journal of Psychopathology and Behavioral Assessment*, vol. 32, pp. 255-263.

Hofstede, G 2001, *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*, 2nd ed., Sage Publications, Thousand Oaks.

Hui, CH & Harry, CT 1986, 'Individualism-collectivism: A study of cross-cultural researchers', *Journal of Cross-Cultural Psychology*, vol. 17, pp. 225-247.

Hui, CH, Triandis, HC & Yee, C 1991, 'Cultural differences in reward allocation: Is collectivism the explanation', *British Journal of Social Psychology*, vol. 30, pp. 145-157.

Linehan, MM & Dimeff, L 2001, 'Dialectical Behavior Therapy in a nutshell', *The California Psychologist*, vol. 34, pp. 10-13.

Markus, HR & Kitayama, S 1991, 'Culture and the self: Implications for cognition, emotion, and motivation', *Psychological Review*, vol. 98, no. 2, pp. 224-253.

Miyamoto, Y & Ma, X 2011, 'Dampening or savoring positive emotions: A dialectical cultural script guides emotion regulation', *Emotion*, vol. 11, no. 6, pp. 1346-1357.

Ochsner, KN, Ray, RD, Cooper, JC, Robertson, ER, Chopra, S, Gabrieli, JDC, et al. 2004, 'For better or for worse: Neural systems supporting the cognitive down-and-up regulation of negative emotion', *Neuro Image*, vol. 23, pp. 483-499.

Osella, F, & Osella, C 1999, 'From transience to immanence: Consumption, life-cycle and social mobility in Kerala, South India', *Modern Asian Studies*, vol. 33, no. 4, pp. 989-1020.

Segal, Z, Teasdale, J, & Williams, M 2002, *Mindfulness-based cognitive therapy for depression*, Guilford Press, New York.

Soto, JA, Perez, CR, Kim, Y, Lee, EA, & Minnick, MR 2011, 'Is expressive suppression always associated with poorer psychological functioning? A cross-cultural comparison between European Americans and Hong Kong Chinese', *Emotion*, vol. 11, no. 6, pp. 1450-1455.

Wong, KYM 2009, *A cultural comparison of cognitive emotion regulation strategies: Moderation of cultural values on psychological well-being*, unpublished dissertation, City University, Hong Kong, Department of Applied Social Studies.

Zhu, X, Auerbach, RP, Yao, S, Abela, JRZ., Xiao, J, & Tong, X 2008, 'Psychometric properties of the cognitive emotion regulation questionnaire: Chinese version', *Cognition and Emotion*, vol. 22, pp. 288-307.

