



Short Communication

Cultural differences in the implicit and explicit attitudes toward emotion regulation

Xinmei Deng^{a,b,*}, Sieun An^c, Chen Cheng^d^a College of Psychology and Sociology, Shenzhen University, Shenzhen, PR China^b Shenzhen Key Laboratory of Affective and Social Cognitive Science, PR China^c Department of Psychology, Ashoka University, India^d Department of Psychology, University of Massachusetts Boston, Boston, USA

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ABSTRACT

Culture has a strong influence on how people evaluate and regulate their emotions. Previous findings suggest that Easterners tend to prefer controlling their emotions more than do Westerners. However, there is still little evidence on the prevalence of cultural differences in implicit attitudes towards emotion regulation. The goal of the present study is to investigate cross-cultural differences in the implicit and explicit attitudes towards emotion regulation to help bridge this gap in the literature. The sample consisted of 61 Chinese and 54 European Americans. Emotion Regulation Implicit Association Test (ER-IAT) was used to examine the implicit attitudes towards emotion regulation. Results showed that (1) Chinese implicitly evaluated emotional expression as more negative than European Americans; (2) Similarly, Chinese explicitly valued emotional expression as less important than European Americans. Further implications are discussed.

1. Introduction

Emotion is the key to understanding human behavior and cognition. Previous research has found that people from different cultures prefer different regulatory strategies and have different habits with respect to emotion regulation (Butler, Lee, & Gross, 2009). In fact, some evidence suggests that culture shapes not only our emotions but also the way they are experienced and expressed (An, Ji, Marks, & Zhang, 2017). One possible explanation is that an underlying mechanism for the development of emotion regulation attitudes could be people's socio-cultural contexts (Miyamoto & Ma, 2011). Thus, in the current study we aimed to explore cultural differences in attitudes towards emotion regulation.

1.1. Cultural differences in the attitudes towards emotion regulation

Attitudes towards emotion regulation have been studied as regulatory strategies people use to deal with emotional experiences. Attitudes towards emotion regulation influence people's tendencies and their choice of emotion regulation strategies (Mauss, Evers, Wilhelm, & Gross, 2006). Besides the primarily investigated explicit attitudes, the attitudes towards emotion regulation can also be implicit. These implicit beliefs and attitudes occur without conscious awareness (Gross,

2013).

Culture functions by identifying social norms, normative behaviors, and value systems that are relevant to emotions (An et al., 2017). Attitudes towards emotion regulation have been suggested to derive from individuals' implicit social norms and regulatory goals, which may vary according to socio-cultural contexts (Miyamoto & Ma, 2011). According to the Cultural Model of Emotions (Matsumoto & Wilson, 2008), culture creates a belief and value system that calibrates emotional responses and behaviors to prevent social chaos and to maintain social order. For example, due to a highly advocated interpersonal harmony by Chinese culture, Chinese adolescents tend to down-regulate their positive emotions, using strategies like suppressing positive facial expressions and reappraising temporary successes to avoid potential harm to interpersonal harmony (Deng, Sang, & Luan, 2013). East Asians are more inclined to internal regulation of emotions; that is, they adjust their emotions to adapt to social norms (Wei, Su, Carrera, Lin, & Lin, 2013). External emotion regulation, such as expressing emotions in public, is considered inappropriate and unexpected under a Chinese cultural background (Deng, Sang, & Chen, 2017). Similarly, expressing happiness is perceived as leading to potentially negative consequences (e.g. jealousy). Excessive emotion expression is assumed to distress others in a group, which could negatively impact interpersonal relations. On the contrary, internal emotion regulation, like emotional control, is

* Corresponding author at: College of Psychology and Sociology, Shenzhen University, Shenzhen 518060, PR China.

E-mail address: xmdeng@szu.edu.cn (X. Deng).

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regarded as facilitating avoidance of the potential negative impact on social order. The ability to suppress emotions is considered an essential virtue for achievement and success (Deng et al., 2013), and emotional control is encouraged.

In contrast, people in Western culture have different preferences in the practice of emotion regulation. For example, European Americans are more likely to express their emotions compared to Asian Americans. European Americans are encouraged to express their positive emotions freely (Kitayama, Markus, & Kurokawa, 2000). In fact, emotional expression is considered to be beneficial for mental health and adherence to personal wills (Butler et al., 2009). However, emotional control is related to negative psychological functioning among Westerners (Soto, Perez, Kim, Lee, & Minnick, 2011).

1.2. Measuring explicit and implicit attitudes towards emotion regulation

Taken together, the evidence thus far suggests it is possible that attitudes and evaluations of emotions influence attitudes towards emotion regulation. Although attitudes towards emotions contribute to individual emotion regulation, explicit assessments of these attitudes in prior research have limitations (Greenwald, Nosek, & Banaji, 2003). When people report evaluations of different regulatory strategies retrospectively, their evaluation could be confounded by their semantic memory bias and social norms (Deng et al., 2017).

Recent research considers the Implicit Association Test (IAT) as an important supplement to self-report questionnaires as a predictor in implicit attitudes (Greenwald et al., 2003). The IAT assesses the strength of associations between concepts by measuring reaction times in computer-administered categorization tasks. It is an association-measurement-procedure that relies on the psychological contrast between two target categories and the two attribute categories. Although implicit measures take the advantages of avoiding semantic memory bias and social norms, some recent criticisms are raised of the IAT. For example, Forscher and colleagues (under review) indicated that implicit attitudes are more malleable than explicit attitudes. Implicit attitudes are not necessary to be correlated with an actual behavior. Oswald, Mitchell, and Blanton (2014) suggested that implicit measures were less correlated with the criterion measures compared to explicit measures. Therefore, there is much interest in this topic, and it is necessary to examine both implicit and explicit attitudes.

The outcomes of implicit and explicit measurement are sometimes different in terms of the studied topics (Nosek, Banaji, & Greenwald, 2002). Although cross-cultural differences in emotion regulation are nuanced in previous studies, few of those studies examined both implicit and explicit attitudes towards different emotion regulation strategies cross-culturally. In the present study, we measured both implicit and explicit attitudes towards emotion regulation in different cultural backgrounds.

Previous studies indicated that Chinese habitually used down-regulatory strategies in their daily lives (Deng et al., 2013). However, emotional expression is related to better emotional status and psychological functioning in Western society (Soto et al., 2011). Given the differences in practices and habits of emotion regulation in Chinese and Western societies, we predicted that positive attitudes towards emotional control would be stronger in Chinese than that in European Americans, and that positive attitudes towards emotional expression would be stronger in European Americans than in Chinese.

2. Method

2.1. Design and participants

A fully between-participants design was adopted; the independent variables were cultures (East vs. West), and the dependent variables were implicit and explicit attitudes about emotion regulation. An a priori power analysis using the G*power software (Foerster, Roser,

Schoeni, & Röösl, 2015) revealed that it would require 106 participants to detect a moderate effect size in a *t*-test (and 82 in a correlational analysis) with 80% power. We recruited 115 participants; 61 Chinese undergraduates (39 women; $M_{age} = 20.11, SD = 1.78$) from a university in China, and 54 European Americans undergraduates (28 women; $M_{age} = 23.52, SD = 3.57$) from a university in the United States of America. All of the Chinese participants were ethnic Chinese. All European American participants were Caucasians. Written consent was obtained from all participants. The research protocol was approved by the Institutional Review Board at a large university.

2.2. Procedure and materials

During the study, participants completed a set of questionnaires regarding their demographic information and attitudes towards emotion regulation. They also completed a computer-administered test which measured their relative implicit attitudes towards emotion regulation (ER-IAT, see below) in the laboratory in their respective university.

Implicit attitudes towards emotion regulation were assessed using the Emotion Regulation-IAT task (the ER-IAT, Deng et al., 2017). The task was administered with a program from Inquisit Software. The ER-IAT task was used to examine the implicit association strength between the targets, which were the emotional regulation categories (emotional expression and emotional control), and the attributes, which were emotional words (positive and negative concepts). See Supplementary Materials 1. The nine-item Attitude Towards Emotion Regulation Scale was used to measure explicit attitudes towards emotion regulation (i.e., emotional expression and emotional control Liu & Sang, 2009). Participants rated their answers using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The Cronbach's α coefficient of the emotional expression subscale was 0.86 for Chinese and 0.66 for European Americans. The Cronbach's α coefficient of the emotional control subscale was 0.65 for Chinese and 0.69 for European Americans.

3. Results

3.1. Cross-cultural differences in implicit attitudes towards emotion regulation

D values for both Chinese and European Americans were significantly greater than 0 (Chinese: $t(60) = 6.05, p < .001, d = 1.56, 95\%CI[0.25, 0.50]$; European Americans: $t(53) = 2.53, p = .014, d = 0.70, 95\%CI[0.03, 0.26]$). The results indicated that both Chinese and European Americans implicitly evaluated emotional control more positively than emotional expression as an emotion regulatory strategy. As shown in Table 1, D values of Chinese were higher than that of European Americans, $p = .007, d = 0.52, 95\%CI[0.06, 0.40]$.

Table 1
Cross-cultural Comparisons between Chinese and European Americans.

	Chinese		European Americans		<i>t</i>
	<i>N</i> = 61		<i>N</i> = 54		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
D values of the ER-IAT (implicit attitudes towards control)	0.38	0.49	0.14	0.42	2.74**
Explicit attitudes towards emotional expression	0.42	0.9	4.07	0.55	-4.57***
Explicit attitudes towards emotional control	3.55	0.78	3.78	0.76	-1.59

** $p < 0.01$.

*** $p < 0.001$.

3.2. Cross-cultural differences in explicit attitudes towards emotion regulation

Explicit attitudes towards emotional expression of Chinese were stronger than that of European Americans, $p < .001$, $d = -0.86$, 95%CI[-0.93, -0.37]. Compared to European Americans, Chinese believed emotional expression was a less positive regulatory strategy.

4. Discussion

The present study is the first to investigate cultural differences in attitudes towards emotion regulation using both explicit and implicit measures. Consistent with our hypotheses, compared with European Americans, Chinese explicitly evaluated emotional expression as less positive and implicitly evaluated emotional control as more positive. Asians regulated their emotions to fit others' expectations more than did the European Americans (Boiger, Mesquita, Tsai, & Markus, 2012). Therefore, the attempts at concealing pride to avoid breaking of interpersonal harmony in Chinese culture may be a possible reason for differences in the attitudes towards emotion regulation shown by Chinese and European Americans in the present study.

The present findings have implications for understanding different regulatory strategies in different cultural settings. Previous studies indicate that individuals under different cultural backgrounds not only differ in the way they perceive emotions, but also in the way they respond to them (Butler et al., 2009). For example, in Asian cultures, people are discouraged from expressing their emotions (Kitayama et al., 2000). Expressing emotions freely is more encouraged in Western cultures compared to Eastern cultures, which could be an adaptive way to promote psychological well-being (Soto et al., 2011). The emotion regulation strategies that people use reflect their knowledge structures (Mauss et al., 2006). Findings from the present study demonstrate that there are cultural differences in the attitudes and representations of different regulatory strategies. Compared to European Americans, Chinese evaluate emotional expression as more negative and emotional control as more positive. In this way, Chinese eliminate the use of emotional expressions and apply more emotional control strategies when regulating emotions.

In the present study, we tried to complement the explicit results with implicit measures. When explicitly measuring attitudes, the processes of evaluation are at a conscious level, and are changeable according to the current context. It could be used to drive thoughts and behaviors (Jones, Kirkland, & Cunningham, 2014). The explicit answer is a combination of an individual's self-identity, desires, and social norms in a complex way. Individuals' explicit evaluations could be confounded by their semantic memory biases and social desirability (Greenwald et al., 2003). However, Nosek et al. (2002) argued that measuring implicit attitudes could avoid the influence of social desirability and could be more reliable than the explicit attitudes.

4.1. Limitation and future directions

There are a few caveats to note. Limited by the experimental paradigm, positive and negative emotion regulation was not separated. However, Park et al. (2013) suggest that Easterners' preference for expressing their negative emotions is related to social status. Easterners (e.g., Japanese) who have higher social status prefer to express negative emotions more than their Western counterparts. Thus, differences between positive and negative emotion regulation and among people of varied social status should be examined in future studies.

In closing, the current research investigated cross cultural differences in the implicit and explicit attitudes towards emotion regulation. The findings showed that both cultures consider emotional control more positively than emotional expression. Still, Chinese are more positive towards emotional control compared to Americans. Such findings are particularly important in that a mechanism underlying

cross-cultural differences in emotion and emotion regulation has been addressed experimentally. This is consistent with past findings and also contributes to mending the knowledge gap by exploring the mechanism of cross-cultural differences. Understanding how humans deal with and think about emotion and emotion regulation and their cultural similarities and differences is critical for humanity, and especially the contemporary globalizing world.

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Declaration of Competing Interest

All authors declare that they have no conflict of interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.paid.2019.05.057>.

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