

Cross-Cultural Differences in the Determinants of Maternal Emotion Coaching:
Role of Maternal Emotional Awareness and Emotion Regulation

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Abstract

Despite many positive outcomes associated with emotion coaching, factors related to individual differences in emotion coaching have yet to be explored. The current study examined cultural differences in the role of maternal characteristics, specifically emotional awareness and emotion regulation, as determinants of emotion coaching. These findings will facilitate culturally desired emotion socialization practices leading to optimal emotional development of children.

In the current study, I translated two English-based questionnaires into Chinese to assess maternal emotional awareness and emotion coaching. Next, I examined relations of reappraisal, suppression, and emotional awareness to maternal emotion coaching. I also investigated the role of maternal emotional awareness as a mediator in the relation of maternal use of reappraisal and suppression to maternal emotion coaching in both Chinese and American cultures.

Participants included American ($n=164$) and Chinese ($n=163$) mothers. Maternal emotional awareness was measured using subscales of Toronto Alexithymia Scale 20 and Difficulties in Emotion Regulation Scale. Emotion regulation strategies were assessed using Emotion Regulation Questionnaire. To measure emotion coaching, mothers completed Parents' Beliefs about Children's Emotions questionnaire. Structural equation models were estimated to examine how maternal emotional awareness and emotion regulation related to emotion coaching.

Results confirmed the reliability and validity of the Chinese questionnaires. Maternal emotion coaching did not include mothers' views about negative emotions because equivalence could not be established across Chinese and American cultures; therefore, the emotion coaching discussed in this study is different from previous research on emotion coaching that typically involves responses to negative emotions. Maternal emotional awareness was associated with their emotion coaching in both samples and the strength of the association was not different across cultures. However, relations of reappraisal and suppression to emotional awareness and emotion coaching were different across Chinese and American samples. Emotional awareness mediated the relation of reappraisal to emotion coaching only in the American sample. Additionally, emotional awareness was a mediator of the relation of suppression to emotion coaching in both samples. Overall, the findings of this study supported that maternal emotional awareness and use of emotion regulation strategies are important determinants of maternal emotion coaching in both cultures.

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General Audience Abstract

This study examined the cultural differences in the role of maternal characteristics as components of emotion coaching which provides parents with practical guidelines on how to teach their children about emotions. The two maternal characteristics studied were if mothers were aware of their emotions (emotional awareness) and were able to control their emotions (emotion regulation). Two widely used emotion regulation strategies are reappraisal and suppression. Reappraisal refers to changing the interpretation of an emotional situation. Suppression refers to inhibition of emotion expressions.

First, I translated two English-based questionnaires into Chinese to assess maternal emotional awareness and emotion coaching. Next, I examined how the emotion regulation and emotional awareness were related to emotion coaching. Cross-cultural differences in these relations across Chinese and American cultures were tested.

Participants included 164 American mothers and 163 Chinese mothers. Maternal emotional awareness was found to be associated with emotion coaching in both samples. Emotion coaching typically includes mothers' beliefs about children's positive emotions, negative emotions, and parents' roles in guiding children's emotions. In my results, negative emotions were not included because negative emotions could not be equally compared across Chinese and American samples. Additionally, suppression was related to emotion coaching indirectly in both cultures. The relations of reappraisal to emotion

coaching were different across Chinese and American samples. American mothers who used reappraisal frequently also valued positive emotions and guiding children about emotions. Conversely, the use of reappraisal was unrelated to emotion coaching for Chinese mothers.

Overall, the findings of this study supported the idea that maternal emotional awareness and use of emotion regulation strategies are important determinants of maternal emotion coaching. Mothers who believed in the value of positive emotions and the value of teaching children about emotions were more aware of their emotions and better at regulating their own emotions. In general, these associations were similar for American and Chinese samples, even though each culture has a unique perspective and value related to children's emotions. These findings will promote our understanding of factors related to emotion coaching and further facilitate culturally desired emotion socialization practices leading to the optimal emotional development of children.

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Introduction

Socialization refers to the process of preparing young children to manage the tasks of their social life, and socialization may facilitate or impair children's "ability and motivation to acquire individual and culturally shared competencies at a social, emotional, and cognitive level" (Bugental & Grusec, 2006, p. 367). Given the importance that socialization has in children's lives, it is essential to understand factors that relate to parents' ability to provide optimal socialization to their children.

The study on the process of socialization has a long history, but the socialization of emotion, especially emotion understanding, emotion experience and expression, as well as emotion regulation, has only received increased attention in the past two decades (Eisenberg, Cumberland, & Spinrad, 1998). Given the fact that emotions are omnipresent in every individual's life and serve invaluable functions, including helping to achieve goals (Levenson, 1999) and facilitate communication (Barret & Campos, 1987), it is critical for children to learn from socializers about different aspects of emotions and to develop emotion related capacities. Supportive emotion socialization has been related to children's well-being including their effective emotion regulation (Blair et al., 2014; Cole, Dennis, Smith-Simon, & Cohen, 2009), increased social competence (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997), better peer relationships (Blair et al., 2014), higher academic performance (Gottman, Katz, & Hooven, 1996), and lower levels of behavioral problems (Ramsden & Hubbard, 2002; Shortt, Stoolmiller, Smith-Shine, Mark Eddy, & Sheeber, 2010). Because emotional socialization is a key piece of children's socialization, the current study focused on one type of emotional socialization, specifically emotion coaching.

There are several reasons why emotion coaching is the most important process of emotional socialization. First, above and beyond other parenting behaviors, such as responsiveness, scaffolding, and praise, emotion coaching contributed uniquely to children's social-emotional competence, peer relations, physical health, and academic achievement (Brophy-Herb et al., 2011; Gottman et al., 1996). Because emotion coaching involves parents' beliefs and values about emotion and intervening with their children's emotions, it directly affects children's emotion regulation and conscious thoughts and actions about emotions.

Second, emotion coaching provides parents with practical guidelines on how to intentionally teach their children about the world of emotion, while other emotion-related parenting behaviors, such as being warm and structuring, provides no real guidelines for parents for emotional socialization (Gottman et al., 1996). Since most parents are not intentionally engaging in emotional socialization (Denham, Bassett, & Wyatt, 2015), teaching parents about emotion coaching through intervention and prevention programs can be helpful in promoting the effectiveness of parental emotional socialization.

Third and most importantly, emotion coaching has been found to be related to better social relationships, reduced internalizing and externalizing behaviors, and better academic achievement (Dunsmore, Booker, & Ollendick, 2013; Gottman et al., 1996; Havighurst, Wilson, Harley, Prior, & Kehoe, 2010; Katz & Windecker-Nelson, 2004; Ramsden & Hubbard, 2002; Shortt et al., 2010). In addition, parents who participated in an intervention program using emotion coaching guidelines had greater empathy and improved emotion coaching skills; their children had more emotion knowledge and reduced behavioral problems (Havighurst et al., 2013).

Given the importance of emotion coaching and the relation between emotion coaching and better child outcomes, it is necessary to fully understand the emotion coaching process. In order for us to completely understand a socialization process, including emotion coaching, we must take the complexity of the socializers, in this case mothers, into consideration (Bugental & Grusec, 2006). Following the same logic, Belsky (1984) proposed that it is important to study the determinants of parenting, because individual differences in parenting can promote or undermine children's optimal development. The determinants of parenting shape childrearing behaviors and strategies, which in turn influence child development. Therefore, studying the determinants of parenting can help us understand why parents parent the way they do, further promoting desired parenting and in turn supporting child development.

The determinants of emotion coaching, however, have been neglected in research. Therefore, the questions of what factors are associated with maternal emotion coaching abilities and how these factors would predict emotion coaching need to be examined. Belsky (1984) considered characteristics of the parents to be the most important factor in determining parenting, because parental characteristics not only had a direct effect on parental functioning but also played an important role in acquiring contextual support, which in turn was related to parents' psychological well-being and parental functioning.

Following from Belsky, I proposed that maternal characteristics would be associated with individual differences observed in maternal emotion coaching. The two factors that I proposed to be the most relevant to understanding emotion coaching were maternal emotional awareness and emotion regulation. Maternal emotional awareness reflects how attentive parents are to their own emotions and has been related to their ability to identify emotions in their children (Salovey, Stroud, Woolery, & Epel, 2002), which is a key component of emotion coaching. Maternal

emotion regulation relates to mothers' ability to engage in emotion coaching because mothers who had difficulty regulating their own emotions tended to be harsh or ignore their children when encountering emotional situations (Buckholdt, Parra, & Jobe-Shields, 2014; Jones, Brett, Ehrlich, Lejuez, & Cassidy, 2014). The important issue that needs to be addressed is whether mothers, who cannot regulate their own emotions well, can coach their children about emotions.

Alongside maternal characteristics as determinants of emotion coaching, Eisenberg et al., (1998) proposed culture as one of the predictors of emotion-related parenting practices in their heuristic model of the socialization of emotion. Culture refers to “a set of traditional, explicit and implicit beliefs, values, actions, and material environments that are transmitted by language, symbol, and behavior in an enduring and interacting group of people” (Saarni, Campos, Camras, & Witherington, 2006, p. 227), and it plays an important role in determining the variations of emotion-related parenting. Since different cultures have different beliefs and values about emotions (Lillard, 1998), cultural expectations can inform mothers about the display rules of emotions, causes and consequences of emotions, the acceptance of emotions, as well as the way to deal with emotions. Because Chinese culture and American culture hold distinctly different views about emotions, studying the differences in emotion coaching between these two cultures would reveal how cultural values of emotions relate to emotion socialization.

Therefore, in my proposed model (see Figure 1), I focused on the cross-cultural differences (within American and Chinese cultures) in emotion regulation, including reappraisal and suppression, and emotional awareness as determinants of emotion coaching. To test this model in the Chinese sample and to examine the cross-cultural differences across the two groups, two questionnaires assessing maternal emotion coaching and emotional awareness were translated in Chinese. I expected that higher levels of reappraisal and lower levels of suppression

would predict higher levels of emotional awareness, which would then predict higher levels of maternal emotion coaching. Cultural differences were examined by comparing the models across both cultures studied. Covariates were controlled for in the model.

Emotion Coaching

Gottman et al. (1996) introduced the concept of meta-emotion philosophy to represent a set of parents' organized beliefs and feelings about both their own emotions and their children's emotions. Gottman et al. (1996) interviewed parents about their own experiences of emotions (anger and sadness), their beliefs about their own emotion expression and control, and their views and responses to their children's emotions. Two major variables, awareness and coaching, were generated from the analysis of the interview (Gottman, Katz, & Hooven, 1997). Parents who had both high awareness and coaching were identified as having an emotion coaching meta-emotion philosophy, which includes: (a) parents' awareness of their own and their children's low-intensity emotions, (b) view of children's negative emotions as opportunities for intimacy or teaching, (c) validation of their children's emotions, (d) assisting children in verbally labeling their emotions, and (e) problem solving, which includes discussing goals and strategies for dealing with emotions (Gottman et al., 1996).

In the meta-emotion model building and conceptualization, emotion coaching and awareness were two different variables (Gottman et al., 1997). Though Gottman et al. (1997) found coaching and awareness to be correlated when measured by meta-emotion interview, they did not provide a clear picture of how awareness relates to coaching. Therefore, in the current study, I measured maternal emotion coaching and emotional awareness of their own emotions separately to examine the relation between emotional awareness and emotion coaching.

As far as conceptualizing the coaching part of the meta-emotion philosophy in this study, I proposed that in addition to mothers' thoughts and feelings about emotions, mothers' perception of emotion coaching practices were also important and should be measured. Although parents' meta-emotion philosophy is different from parenting behaviors conceptually, the coding system of emotion coaching in Gottman et al.'s study (1996) reflects not merely thoughts and feelings but also parenting behaviors, including talking to the children, teaching children, and intervening in the emotional events (Eisenberg, 1996). Hence, in the current study, mothers' perceptions of their roles in guiding children's emotions were measured.

Although in this study, maternal emotion coaching only reflected mothers' views and beliefs about children's emotions and emotion coaching, previous research found that mothers' perceptions of their emotion coaching and their practice of emotion coaching were related (Lozada, Halberstadt, Craig, Dennis, & Dunsmore, 2016; Perez Rivera & Dunsmore, 2011). For example, mothers who believed in their role of guiding children's emotions also labelled emotions more frequently. In contrast, mothers who believed emotions were dangerous explained emotions less frequently (Perez Rivera & Dunsmore, 2011). Therefore, mothers' beliefs about children's emotions and their perceptions of their role in guiding children's emotions would provide insights about their emotion coaching practices.

Given that emotion coaching was found to be related to better outcomes in children, such as higher social competence, better emotion regulation abilities, better peer relations, and higher academic achievement (Gottman et al., 1996; Katz & Windecker-Nelson, 2004; Ramsden & Hubbard, 2002; Shortt, et al., 2010), factors relating to mothers' ability to engage in emotion coaching need to be studied. Emotional awareness, which is one of the two major variables that

were derived from the meta-emotion model building (Gottman et al., 1997), thus, needs to be considered.

Emotional Awareness

Emotional awareness refers to an attentional process with interpretative and evaluative functions, which includes relating physiological experiences to emotions, distinguishing different emotions qualitatively, locating the sources of the emotions, as well as monitoring emotions (Rieffe, Oosterveld, Miers, Terwogt, & Ly, 2008). Specifically, identifying the emotions for the physical experiences, differentiating the nuances of different emotions, and being able to find the causes of the emotions are all important components of emotional awareness.

There are three important ways in how emotional awareness relates to emotion coaching. First, the level of emotional awareness reflects people's beliefs and values about emotions. Parents who were aware of their emotions and could distinguish the nuances of different emotions tended to be more accepting of emotions, believing that emotions were good, healthy, and that it is positive to attend to emotions (Gottman et al., 1997). They considered it important to be aware of and able to handle their own emotions. On the other hand, parents who were low in emotional awareness often held the view that emotions were toxic and dangerous and thus preferred to ignore emotions. Therefore, mothers who are higher in emotional awareness may be more likely to have a positive belief about emotion and attend to their own and their children's emotions, and actively attending to children's emotions is one component of emotion coaching.

Second, emotional awareness was found to be associated with the ability to identify emotions in others (Salovey et al., 2002). Mothers' emotional awareness can promote their awareness of their children's emotions. For example, maternal awareness of their own emotions was positively related to maternal awareness of children's emotions (Gottman et al., 1997; Katz

& Windecker-Nelson, 2004). Thus, emotional awareness may promote mothers' ability to engage in emotion coaching because they are better able to identify their children's emotions. For instance, maternal emotional awareness was found to predict mothers' engagement in addressing children's emotions directly (Monti, Rudolph, & Abaied, 2014) and coaching of their children's emotions (Hooven, Gottman, & Katz, 1995).

Third, theoretically individuals who are high in emotional awareness consume fewer cognitive resources to process initial emotional responses, which allows them to be better able to adopt problem-solving strategies (e.g., removing or eliciting the source of emotions), especially under stressful situations (Gohm & Clore, 2002). Gohm and Clore (2002) theorized that individuals who are highly aware of their emotions can easily locate the source of the emotions. On the contrary, if individuals are unable to locate the source of emotions, they can be considered as a reaction to almost anything and thus distort one's judgment of the emotion-eliciting situation (Clore, 1994). In stressful situations, higher emotional awareness was associated with planning and taking action to remove the stressor and thinking of the situation in a positive way (Gohm & Clore, 2002). Applying the same logic to emotion coaching, when in emotion-eliciting situations, parents who are high in emotional awareness may be better able to do emotion coaching practices. Since parents with higher emotional awareness would have more resources to process the information in the situation, they would have a better judgment of the situation and a more accurate interpretation of the source of the emotions. Thus, they would be more likely to be able to engage their children in a conversation to discuss the causes and consequences of the emotion and deal with the emotion with problem-solving strategies.

In addition, emotional awareness was associated with lower physiological arousal, such as habituated cortisol release and lower systolic blood pressure (Salovey et al., 2002), which

suggests that emotional awareness may help reduce physiological reactivity to emotions. Just as in the case of lower levels of consumption of cognitive resources, lower levels of arousal may also free resources and allow individuals to deal with the emotion-eliciting situations. For example, if a child is angry and then breaks a glass of water, which pours all over the child, who cries loudly, parents can have different emotions at the same time, such as fear of the broken glass hurting the child, anger towards the ill-behaved child, and worry that the loud cry would annoy other people. If the parents are highly aroused and thus have lower information processing abilities (Adam, Teeken, Ypelaar, Verstappen, & Paas, 1997; Rydell, McConnell, & Mackie, 2008), they might not be cognitively capable of adopting the best strategy to solve the problem. As in the previous example, the parents might be too aroused that they can only make sure that the child is not hurt, but they might not be able to come up with the best strategy to calm the child down or they cannot control their own emotions and yell at the child. Needless to say, they would not have the cognitive resources needed to attend to and engage in emotion coaching with their child's emotion. If the parents have higher emotional awareness and are less aroused, they would be more likely to emotion coach their children, including calming the child down and asking why the child is angry. In addition, they are more likely to take this situation as an opportunity to teach the child why it is not appropriate to express anger by breaking a glass.

Based on the abovementioned reasons, I hypothesized that mothers with higher emotional awareness would be better able to deal with their children's emotions and thus better at coaching their emotions. First, mothers with higher emotional awareness were more likely to have an accepting attitude of emotions, believing it is healthy and positive to attend to emotions (Gottman et al., 1997). With this attitude, mothers tend to pay attention to their children's emotions so that they would notice even low-intensity emotions of their children and know when

to do emotion coaching. Second, mothers with higher emotional awareness appeared to have more understanding, better interpretation of, and more support in their children's emotions (Gottman et al., 1997; Hooven et al., 1995; Katz & Windecker-Nelson, 2004). Third, mothers with higher emotional awareness may have better information processing abilities, because it consumes fewer cognitive and physical resources of an individual. Thus, these mothers are better able to attend to their children's emotions.

Gottman et al. (1997) used meta-emotion interview to measure emotional awareness; however, the inter-rater reliabilities of the coding of awareness of own emotions were sometimes low. For example, the inter-rater reliability for awareness of one's own emotion was only $r = .57$ (Katz & Windecker-Nelson, 2004). Emotional awareness focuses on people's awareness of their emotions and feelings, so by nature it is difficult to be expressed through interviews and rated by coders. Therefore, emotional awareness may be better measured by self-rated questionnaires, which was what I used to assess emotional awareness in the current study. One of the subscales I used to assess emotional awareness was not adapted in Chinese, so I translated the questionnaire into Chinese.

Although Gottman et al. (1997) examined the relation between emotional awareness and emotion coaching using the meta-emotion interview, there are no other studies that analyze the relation between emotional awareness and emotion coaching as separate measures. The current study addressed this gap in the literature. Besides emotional awareness, I also hypothesized emotion regulation to be related to emotion coaching.

Emotion Regulation

In terms of defining emotion regulation, there are three core features of the emotion regulation process (Gross, 2014). First, the emotion generation processes are modified by the

activation of a certain goal (Gross, Sheppes, Urry, 2011). Second, in order to achieve the goal, emotion regulation strategies are used. Third, emotion responses, the outcomes of emotion regulation, are the consequences of trying to achieve the goal through a certain regulation strategy.

Emotion regulation strategies are the means an individual uses to regulate their emotions (Koole, 2009). Two widely used emotion regulation strategies are reappraisal and suppression (Gross & John, 2003). Reappraisal refers to changing the interpretation of a potentially emotional situation to alter its emotional impacts (Lazarus & Alfert, 1964), which happens before emotion responses are fully activated (Gross & John, 2003). For example, in a situation when people see another person breaking their water bottle, the use of reappraisal would be that before they get angry, they interpret the situation as an accident. Suppression, on the other hand, refers to inhibition of emotion-expressive behaviors after the emotion responses are generated (Gross, 1998). When people suppress, they do not express emotions or not display the action tendencies. People use these emotion regulation strategies, including reappraisal and suppression, to regulate which emotions they have, when they have these emotions, and the intensity of the emotions (Gross, 1998).

In general, the use of reappraisal has been associated with higher levels of positive emotion experiences and expressions and lower levels of negative emotion experiences and expressions (Butler, Wilhelm, & Gross, 2006; Egloff, Schmukle, Burns, & Schwerdtfeger, 2006; Gross & John, 2003). On the contrary, the use of suppression has been associated with lower levels of positive emotion experiences and expressions and higher levels of negative emotion experiences. Therefore, reappraisal is generally considered a more adaptive emotion regulation strategy than suppression, since reappraisal relates to outcomes that are more positive.

Given the different emotion regulation outcomes the two strategies may lead to, it is necessary to consider what different effects these strategies may have on emotion coaching. Parents' use of reappraisal was found to be positively associated with parental reported supportive reactions to children's negative emotions, whereas parents' use of suppression was positively correlated with parents' reported minimization and punitive reactions to children's negative emotions (Remmes & Ehrenreich-May, 2014). These findings suggested that parents who are able to cognitively engage in their own emotions and think about their emotions in a strategic way were more likely to participate in emotion coaching with their children. Specifically, the use of reappraisal is effortful, involving actively changing the meaning of the immediate appraisals (Robertson, Daffern, & Bucks, 2012), and thus may represent greater acceptance of emotional experiences, as well as a higher ability to cognitively engage in emotions.

Furthermore, the use of reappraisal allows individuals to consider factors that are distal from the current situation, such as potential consequences and long-term goals (Robertson et al., 2012). Because accepting emotions, ability to engage in emotions, and think of consequences and long term goals are all essential to emotion coaching, parents, who use more reappraisal, should be better able to accept and engage in emotions cognitively and actively consider factors to change the interpretation of the situation, may be better able to participate in emotion coaching. Suppression, on the other hand, was associated with heightened experience of negative emotions, such as anger and anxiety (Hofmann, Heering, Sawyer, & Asnaani, 2009; Szasz, Szentagotai, & Hofmann, 2011), less memory of emotional events (Richards & Gross, 2006), and biased judgements based on the emotions (Hess, Beale, & Miles, 2010). Suppression, therefore, might bias mothers' judgments about their children's emotions and impair their

memory of the emotion-related situations. Since mothers who suppress might not have an accurate judgment of children's emotions or a good memory of the emotional events, suppression might then lead to low-quality emotion coaching. In addition, the use of suppression reduces mothers' ability to engage in and talk about emotions, because suppression reduces emotion-expressive behaviors, including verbal expression of emotions.

In sum, reappraisal appears to be related to positive emotional outcomes in mothers (e.g., more positive emotions and less negative emotions) and more supportive reactions to children's emotions. On the contrary, suppression relates to less positive emotional outcomes in mothers and minimization and punitive reactions to children's emotions. Since attending to and respecting children's emotions are central to emotion coaching, I hypothesized that reappraisal would be associated with higher emotion coaching, whereas suppression would be related to lower emotion coaching.

In addition to emotional awareness and emotion regulation predicting emotion coaching, emotion regulation was hypothesized to be associated with emotional awareness in the proposed model. According to Saarni (1999), the important features of emotion regulation development include emotional awareness and the ability to appraise feelings according to personal and cultural expectations. Therefore, the strategies individuals use to modify the emotion generating process and/or emotion responses may affect their emotional awareness. For example, children who displayed aggressive behavior often failed to identify their anger and tended to consider other people's actions as the only cause of their aggressive behavior (Shirk, 1998). If they were taught to reappraise the situation, they may be able to identify that their own anger is also contributing to the aggressive behavior. In addition, suppression is used after the emotion responses are generated to inhibit the emotion expressions. The use of suppression does not

require the conscious awareness of emotions, stopping individuals from exploring their reaction to the emotion-eliciting situations extensively (Subic-Wrana et al., 2014). Frequent and automatic use of this strategy may lead to failure to differentiate emotions and locate the source of the emotion, which may make people attribute the emotion to wrong causes and thus hinder the correct judgment of the situation (Clore, 1994). It has been shown that more use of reappraisal and less use of suppression were associated with higher levels of emotional awareness (Eastabrook, Flynn, & Hollenstein, 2014; Subic-Wrana et al., 2014), which supported that the more effective emotion regulation strategy of reappraisal may facilitate emotional awareness and the use of the less effective, and potentially harmful, emotion regulation strategy of suppression may hinder emotional awareness.

Because emotional awareness was hypothesized to be related to emotion regulation and emotion coaching, and emotion regulation was hypothesized to be associated with emotion coaching, emotional awareness might be a mediator of the relation of emotion regulation to emotion coaching. Since the direct relations between emotional awareness and emotion regulation strategies are understudied, the current research aimed to address this research gap by examining if emotion awareness mediated the relation of emotion regulation to emotion coaching.

Culture

In addition to maternal characteristics of emotional awareness and emotion regulation, culture was hypothesized to play an important role in determining individual differences in emotion coaching. Cultural differences were examined by comparing the models across Chinese and American cultures. As previously mentioned, emotion coaching was found to be related to better child developmental outcomes in the American samples (Dunsmore, et al., 2013; Gottman

et al., 1996; Katz & Windecker-Nelson, 2004; Ramsden & Hubbard, 2002; Shortt et al., 2010). Furthermore, within the American cultures one study have examined parents' beliefs about emotions in three different groups: African American, European American, and Lumbee American Indian (Parker et al., 2012). Within the American culture, similarities and differences of parents' beliefs about emotions in the three subcultures were found (Parker et al., 2012). One main similarity that was found in the study was that all three groups considered children's experience and expression of both positive and negative emotions as important (Parker et al., 2012). Even though majority of the studies of emotion coaching were conducted in America, findings have indicated that emotion coaching may have positive influence on Chinese children and punitive reaction to children's emotions might have negative effect (Liang, Zhang, Chen, & Zhang, 2012; Tao, Zhou, & Wang, 2010). For example, parental meta-emotion philosophy was found to be related to better social competence in a sample of Chinese children aged 3 to 5 years old (Liang et al., 2012). Additionally, parents' punitive reactions to children's negative emotions were associated with externalizing behaviors in a sample of school-aged Chinese children (Tao et al., 2010). These findings suggested the importance of examining individual differences in emotion coaching in both Chinese and American cultures.

In Eisenberg and colleagues' (1998) heuristic model, they proposed culture, along with parent characteristics, to influence emotional socialization. They argued that what behaviors are perceived as emotionally competent would vary across culture. Thus, how people define desirable and acceptable socialization outcomes would be related to the way they socialize their children. For example, if one of the cultural beliefs were that strong emotions should not be displayed publicly, the desired socialization would be to teach children not to display their strong emotions in public. In this way, culture influences parental socialization goals and behaviors.

Specifically, Chinese culture often views emotions as disruptive or even dangerous to interpersonal relations (Chao, 1995; Chen et al., 1998). Therefore, Chinese culture is described as viewing the control or moderation of emotional expression as necessary, particularly when emotions may threaten relationships (Russell & Yik, 1996). On the contrary, mainstream American culture encourages the expression of emotion and the verbal analysis of emotion, such as providing causal explanations of emotions (Eid & Diener, 2001). Since Chinese culture and American culture hold distinct views about emotions, studying the differences in emotion coaching between these two cultures will reveal how cultural values of emotions would relate to emotion socialization.

There are two major ways in how culture can relate to emotion socialization. First, the different cultural values of emotion can influence the display rules of emotions (Mesquita & Frijda, 1992; Tsai, Miao, Seppala, Fung, & Yeung, 2007), as well as people's experience, expression, and interpretation of emotions (Eisenberg, 2006). For example, Chia, Moore, Lam, Chuang, and Cheng (1994) found that young Taiwanese men believed more that it is better to suppress emotions when they were upset than their American counterparts did. Not only do people influenced by Chinese culture believe that it is better to suppress their emotions, but it was also found that the use of suppression was higher in Asian Americans than in European Americans (Gross & John, 2003). Furthermore, Chinese young adults reported less positive and negative emotions than American young adults (Eid & Diener, 2001). These results demonstrated that Chinese people value suppression more than American people do, so during emotion coaching Chinese mothers may encourage suppression.

Second, culture influences emotion socialization through language (Lilliard, 1998). Language makes certain concepts more accessible than others and has a continual priming effect

(Lilliard, 1998), facilitating memory and access to schemas (Hoffman, Lau, and Johnson, 1986). Different languages have different sets of emotion words, and the quantity of emotion words largely varies (Lilliard, 1998). Differences in emotion words lead to different ways of describing emotion experiences. For example, when having emotional conversations, less acculturated Chinese Americans used more somatic words, which are bodily terms instead of psychological terms to describe emotions, than did European Americans (Tsai, Simeonova, & Watanabe, 2004). That is to say, Chinese individuals often express emotions through terms and metaphors related to the physical body rather than using designated emotion words (Cheung, 1995). The reason why Chinese individuals tended to use more bodily terms when describing emotion than Americans do is that Chinese culture believes physical and psychological states are closely related (Kleinman, 1986; Ots, 1990), and that in Chinese language emotional and somatic words are less differentiated than in the English language (Tung, 1994). For example, in the Chinese language, the word “heart” (心) is one of the components of the term “happy” (开心) and also one of the components of the term “sad” (伤心).

The somatization of emotions, namely using somatic words to describe emotions, might imply the lack of psychological understanding of emotions. Emotions are closely tied to physical response primitively but are gradually distinguished from the physical response in more advanced mental life (Kleinman & Kleinman, 1985; Tseng, 1975). Using somatic words to describe emotions often may indicate that the ability to use verbal symbols to describe emotions is underdeveloped. Thus, using more somatic words and fewer emotion words may lead to lower emotional awareness. For example, in Chinese language when people verbally express feelings, it is hard to clearly distinguish if the expressed feelings are physical complaints or emotional distress when the context is not clear (Kwong & Wong, 1981), and thus it might be difficult for

people to differentiate the nuanced differences between emotions and locate the source of the emotions.

In addition to the different sets of emotion words, different quantities of emotion words also influence emotion socialization. For example, over 2000 emotion words were found in English (Wallace & Carson, 1973), but only 750 emotion words were found in Taiwanese Chinese (Boucher, 1979). The quantity of emotion words can influence children's exposure to emotion words, as children in cultures that have a larger number of emotion words have a higher chance to be exposed to emotion words. Since exposure to emotion words may facilitate understanding of emotions (Barrett, Lindquist, & Gendron, 2007), individuals in cultures that have more emotion words may have higher levels of emotional awareness than do individuals in cultures that have fewer emotion words. For example, when comparing to an American sample, Japanese students had lower levels of emotional awareness, because of the general fewer use of emotional words of Japanese people than American people (Igarashi et al., 2011). Although no study has compared the difference in emotional awareness in Chinese culture and American culture, it was logical to hypothesize that Americans would have higher emotional awareness than Chinese individuals would.

More specifically regarding my proposed model, through mothers' values of emotions, display rules, and language. First, Chinese culture values emotion control, whereas American culture encourages emotion expression, so it is expected in the current study that Chinese mothers would use suppression more often than American mothers would. Although suppression has generally been found to be related to negative outcomes in American culture, several studies found that it was not necessarily the same in Chinese culture (Su et al., 2015; Su, Wei, & Tsai, 2014). For example, in an experiment where female participants were instructed to

either express or suppress their anger, Caucasian participants showed stronger cardiovascular responses to suppressing than expressing anger while Chinese participants showed stronger cardiovascular responses to expressing anger than suppressing anger (Zhou & Bishop, 2012). The result that expressing negative emotions evoked more of a physiological reaction in Chinese participants than suppression is consistent with Chinese cultural value that negative emotions should be controlled. It is clear that Chinese people are more comfortable suppressing anger than expressing anger, since suppression evoked fewer physiological reactions. However, suppression has also been found to be related to lower school connectedness and higher depressive symptoms in Chinese adolescents (Zhao & Zhao, 2015). Therefore, more research will be needed to address the inconsistent results.

Second, because of the frequent use of somatic words to describe emotions and the relatively small quantity of emotion words in Chinese culture, I hypothesized that the level of emotional awareness would be lower in Chinese culture than in American culture. Since Chinese culture considers that emotions should be controlled and may even be dangerous, lower levels of emotional awareness may not be maladaptive.

Third, cultural values relate to the ways in which parents respond to and discuss children's emotions. For example, Chinese mothers used more negative emotion words when talking about negative events than did American mothers (Fivush & Wang, 2005). Since Chinese mothers value the suppression of negative emotions, negative words towards children can be seen as discouraging or even potentially punishing the expression of negative emotions, which is exactly opposite from emotion coaching. However, discouraging children from expressing negative emotions may not be maladaptive, since expressing negative emotions may not be socially appropriate. In addition, during conversations of emotionally salient events with

their children, American mothers were more likely to explain the causes and consequences of their children's emotions and help their children to deal with their own emotions, while Chinese mothers were more likely to focus on behavioral discipline when talking about emotions (Wang & Fivush, 2005; Wang, 2013). Therefore, I would expect American mothers to be higher in emotion coaching than Chinese mothers. It is important to note that lower emotion coaching may not be problematic in Chinese culture, since Chinese mothers and children may not attend to emotions as often as American mothers and children.

Last, I still expected a mediation effect of emotional awareness in the relation of emotion regulation to emotion coaching in Chinese culture. Specifically, I hypothesized that more frequent use of reappraisal and less frequent use of suppression would predict higher levels of emotional awareness. Since Chinese mothers may rely on suppression to regulate their emotions more than American mothers, I hypothesized that the relation between suppression and emotional awareness would be stronger in the Chinese culture than in the American culture. In addition, more reappraisal and less suppression would predict higher levels of emotion coaching.

Methods and Analyses for Cross-Cultural Studies

Since culture plays an important role in display rules of emotions and socialization of emotions, developing the right measurement to study cross-cultural differences is necessary. One major concern for cross-cultural studies is the equivalence of measures across cultures. Without equivalence, meaningful comparisons cannot be made (Van de Vijver & Leung, 1997). To ensure equivalence, the adaptation of measurement and statistical analyses to test measurement invariance need to be employed.

When participants in a cross-cultural study speak different languages, translation between languages is necessary. Researchers need to make sure that any findings of cultural differences

are not because of the translation. Translation and back translation method was most commonly used for questionnaire translation (Brislin, 1980). Translation and back translation method suggests that one bilingual person translates the questionnaire into the target language and another bilingual individual translates the questionnaire back into the original language. The weakness of the back translation method is that it often produces products that are not easily readable and comprehensible in the translated version (Van de Vijver & Leung, 1997). Therefore, the translated questionnaires should be discussed among native speakers of the target language. Specifically in this study, the number of emotion words is a lot less in Chinese than in English (Boucher, 1979; Wallace & Carson, 1973). For that reason, the questionnaires that are adapted to a Chinese version should only involve emotions that have an accurate translation in Chinese. Additionally, emotional and somatic words are less differentiated in the Chinese language than in the English language (Tung, 1994). To minimize confusion between physical symptoms and emotions, somatic words and metaphors that describing emotions should be avoided in the translation.

In addition to the translation and back translation method, the bilingual technique, which involves bilingual participants take the same test, is also suggested (Brislin, 1980; Hambleton, 1994). Using the bilingual technique, discrepant responses can be detected by testing the correlational structure of the items (Hambleton, 1994). Therefore, in this study, I used a combination of the back translation method and the bilingual technique to ensure the accuracy of the translation and to avoid unusual wording in the translation.

Even when the translation is accurate, the equivalence of measures cannot be assumed. The structural (metric) and scalar equivalence of the measures needs to be examined (Horn & McArdle, 1992; Cheung & Rensvold, 2002; Van de Vijver & Leung, 1997). Structural

equivalence, also metric invariance, refers to similar psychometric properties across cultures. Equal factor structures can be considered structural equivalence. After metric invariance is obtained, scalar invariance needs to be tested. Scalar invariance indicates that the scores from different cultures have similar units of measurement and the comparison of the scores can be made (Poortinga, 1971; Van de Vijver & Leung, 1997). Confirmatory factor analysis, which is a hypothesis testing procedure that used to evaluate an existing model of factor structure, can be used to examine the equivalence across different samples (Watkins, 1989). The equivalence of factor structures (configural model), the factor loadings (metric model), and the intercept of the items (scalar model) needs to be tested across different cultural groups. Achieving scalar invariance indicates measurement equivalence across samples.

Three of the measures I used in the current study were already translated into Chinese using the back-translation methods. These measures included Toronto Alexithymia Scale 20 (TAS-20; Bagby, Parker, & Taylor, 1994) translated by Zhu et al. (2007), Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) translated by Wang, Liu, Li, and Du (2007), and Maternal Emotional Style Questionnaire (MESQ; Lagacé-Séguin & Coplan, 2005) translated by Ngan (2014). Two of the measures I used, including Parents' Beliefs about Children's Emotions (PBACE; Halberstadt et al., 2008) and Difficulties in Emotion Regulation Scales (DERS; Gratz & Roemer, 2004), were not translated into Chinese. Because I needed these two measures to assess maternal emotion coaching and emotional awareness and no other measures can be used as substitutes, I translated the questionnaires into Chinese.

The Proposed Model

The current study examined how maternal emotional awareness and emotion regulation related to emotion coaching (see Figure 1) across Chinese and American cultures. The measures

of the constructs studied needed to be applicable across these two cultures, especially when they have different beliefs about emotions. Two questionnaires without established Chinese versions were translated and the reliability and validity of these questionnaires were examined.

Measurement equivalence was obtained to make certain that the differences in Chinese and American cultures were not due to the translation of questionnaires.

Next, the following research questions were examined. The first research question addressed the relation between maternal emotional awareness and emotion coaching. It was hypothesized that higher emotional awareness would be associated with higher emotion coaching. The second question was to analyze the relation between maternal emotion regulation and emotion coaching. Specifically, reappraisal was hypothesized to be associated with higher emotion coaching, whereas suppression was expected to be related to lower emotion coaching. The third question was to examine if emotional awareness would be a mediator of emotion regulation and emotion coaching. The fourth question involves culture relating to emotional awareness, emotion regulation, and emotion coaching.

Method

Questionnaire Translation

All the questionnaires used in this study were initially developed in English. The Chinese versions of the Toronto Alexithymia Scale 20 (TAS-20; Zhu et al., 2007), Emotion Regulation Questionnaire (ERQ; Wang et al., 2007), and Maternal Emotional Style Questionnaire (MESQ; Ngan, 2014) had already been established. Translation and back-translation procedures (Brislin, 1980) were used to develop the Chinese version of the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) and Parents' Beliefs about Children's Emotions (PBACE; Halberstadt et al., 2008) questionnaire. I translated the two

questionnaires to Chinese, and a Chinese translator who majored in English translated the questionnaires back in English. We compared the two English questionnaires and discussed to resolve any disagreements we had. The Chinese questionnaires were also read by two native Chinese speakers to check whether there were unusual wordings.

Two pilot studies were conducted to examine the accuracy of the translation of the two questionnaires. Participants for both studies were recruited from mailing lists and online forums that were popular among Chinese people who live in American. Both studies required participants to be Chinese native speakers who were also fluent in English. In the first study, 56 Chinese-English bilingual parents filled out both the Chinese and the English versions of PBACE. Since this questionnaire was designed for parents to answer questions about their beliefs about children's emotions, only parents were recruited to participate. If the participants answered "no" to the question asking if they were parents, the questionnaire automatically ended. In the second study, 60 Chinese-English bilingual speakers, among which 39 were students, completed the Chinese and English versions of DERS. To eliminate bias, the participants completed the Chinese version first and then the English version. Correlations and T-tests between the Chinese and English responses were used to detect differences in answers in the Chinese and English version. Items with correlation statistics smaller than .5 and with significant mean differences detected by the t-tests were identified. I then discussed these items with several bilingual and American graduate students to modify the wordings of the Chinese version and ensure equivalence in meaning between the English and Chinese versions.

Participants

The sample included 164 American mothers and 163 Chinese mothers with children aged 6 – 8 years old. In the American sample, children's mean age was 6.80 years old, $SD = .86$.

Except for 6 mothers who did not report their children's sex, 84 boys and 74 girls were in the American sample. Mothers' ethnicity was 90.2% not Hispanic or Latino, 8.5% Hispanic or Latino, and 1.2% did not respond. Mothers' race was 82.9% white, 9.8% Black or African-American, 4.3% Asian, .6% Native Hawaiian or Other Pacific Islander, 1.8% other, and .6% did not respond. For maternal marriage status, 67.1% of the mothers were married, 14% were single, 11% were single and living with a partner, 4.9% were divorced, 1.8% were separated, .6% were widowed, and .6% did not respond. For highest level of education completed by mothers, 41.1% graduated from a 4-year college, 31.9% completed some college or 2-year college, 12.8% graduated from high school, 10.3% completed a master's or doctoral degree, 2.4% completed technical secondary school, 1.2% completed grade school, and .6% did not respond. The average annual family income were in the range of \$45,000 to \$60,000, $M = 4.07$, where 1 = less than \$15,000, 2 = \$15,000-\$30,000, 3 = \$30,000-\$45,000, 4 = \$45,000-\$65,000, 5 = \$60,000-\$75,000, 6 = \$75,000-\$100,000, 7 = over \$100,000. The annual family income was fairly evenly distributed from 1 to 7 with 5.5% to 21.5% of mothers reported in each income range.

In the Chinese sample, the mean child age was 6.95, $SD = .85$. 84 boys and 67 girls were in the sample, and 12 mothers did not report the sex of their children. For mothers' ethnicity, 96.9% of the mothers were Han (the majority ethnicity in China), and 3.1% were other ethnicities, including two Qiang, one Tibetan, one Yi, one Tujia. 94.5% of the mothers were married, 4.9% divorced, and .6% did not respond. For the highest level of education completed, 28.2% completed 4-year college, 25.8% completed some college or 2-year college, 14.8% graduated from a mater's or doctoral degree, 11.7% completed technical secondary school, 9.8% completed high school, 9.2% finished grade school, and .6% did not respond. The average annual family income were in the range of ¥100,000 to ¥150,000, $M = 3.42$, where 1 = less than

¥50,000, 2 = ¥50,000-¥100,000, 3 = ¥100,000-¥150,000, 4 = ¥150,000-¥200,000, 5 = ¥200,000-¥250,000, 6 = ¥250,000-¥300,000, 7 = over ¥300,000.

In the American sample, there were 14 mothers with missing data. Mothers with missing data did not differ from those with no missing data on any of the demographic variables and variables studied. In the Chinese sample, 23 cases had missing data. Mothers who had missing data had children younger than those who did not have missing data. While 73.68% of the mothers with missing data had girls, 40% of the mothers with non-missing data had girls. No other variables were different across mothers with no missing data and mothers with missing data in the Chinese sample.

Procedures

To recruit mothers in the American sample, electronic recruitment notices (see Appendix A) were distributed to online message boards, parenting forums, Facebook groups, and child-related event newsletters in America. Flyers (see Appendix B) were also distributed to the New River Valley Mall to recruit participants. Participants in China were recruited from elementary schools in Sichuan province. I contacted the school officials and met with the teachers during the summer of 2016. They agreed to be contacted for the current study. After the questionnaires were set up, I sent electronic recruitment notices to teachers, and the teachers distributed the electronic notices through emails and online chatting groups to parents. A link to the electronic questionnaires was included in the electronic recruitment notice. Interested mothers were asked to click the link and be directed to the questionnaires. In both samples, one in ten participants were drawn from a lottery to receive a \$25/¥100 Amazon e-gift card as compensation for their time.

The questionnaires were posted on Virginia Tech Qualtrics for the participants to complete. Virginia Tech Qualtrics has been reviewed as secure by Virginia Tech IT Security and approved by IRB. The first page of the questionnaire included a consent. Continuing to the second page implied participants' consent to the study. Mothers completed information about demographics, beliefs about children's emotions, emotional awareness, and emotion regulation. Mothers in China and American completed the same set of questionnaires in the same order. Since some mothers withdrew from the study without completing the questionnaires, there were missing data in the study.

To ensure mothers with children aged 6 to 8 years old were filling out the questionnaires, mothers were asked to fill out their sex, including male, female, and other, and their children's age. If the person who filled out the questionnaire indicated their sex to be male, the questionnaire would automatically end. To check the participants paid attention to the questionnaire, one question asked the participants to check "strongly agree" was added to the Toronto Alexithymia Scale 20 (TAS-20). Two repeated questions were also added to the questionnaire, one in Parents' Beliefs about Children's Emotions (PBACE) questionnaire and one in the Difficulties in Emotion Regulation Scales (DERS), to check if participants' answers to those questions were hugely different. A reCAPTCHA was also added at the end of the questionnaire to detect robots filling the questionnaire out. In the Chinese sample, no robots were detected, but males tried to fill the questionnaire out. In the American sample, 53 robots were detected. These participants were excluded from the data.

Measures

Parents' Beliefs about Children's Emotions (PBACE; Halberstadt et al., 2008; see Appendix C). The PBACE questionnaire was administered for the mothers to complete to assess

their beliefs about children's emotions. The questionnaire includes 47 items and the mothers rated their agreement on each item on a 6 point scale (1 = strongly disagree to 6 strongly agree). The subscales of PBACE questionnaire that were used in this study included (1) value of positive emotions (5 items, e.g., "It is important for children to be able to show when they are happy."), (2) value of negative emotions (7 items, e.g., "It is useful for children to be angry sometimes."), and (3) parents' role in guiding children's emotions (5 items, e.g., "It is a parent's job to teach their children how to handle their emotions."). A score of each subscale was computed by averaging the items in the subscale. In the American sample, internal consistency was good for both value of positive emotions, $\alpha = .81$, and parents' role in guiding children's emotions, $\alpha = .81$. The internal consistency was acceptable for value of negative emotions, $\alpha = .68$. This was the first questionnaire the participants completed, so there was no missing data in the current study.

Maternal Emotional Style Questionnaire (MESQ; Lagacé-Séguin & Coplan, 2005; See appendix F). To assess maternal emotion coaching, mothers completed the MESQ, which was adapted from the Meta-Emotion Interview. The 7 – item emotion coaching subscale (e.g., "When my child is angry, it's an opportunity for getting close.") was used in the current study. An emotion coaching score was calculated by averaging each item in the subscale. The internal reliability for this subscale is acceptable in the American sample, $\alpha = .78$, and in the Chinese sample, $\alpha = .68$. This questionnaire was the second questionnaire the mothers completed, and starting from this questionnaire there were missing values in the data (see Table 4).

Difficulties in Emotion Regulation Scales (DERS; Gratz & Roemer, 2004, see Appendix I). Mothers completed the Lack of Emotional Clarity subscale (4 items; e.g., "I am

confused about how I feel.”) of DERS to assess their emotional awareness. In the original scale, higher scores indicated lower emotional awareness. For the purpose of this study, scores were recoded so that higher scores indicated higher emotional awareness. The scores of the subscale were computed by averaging each item in the subscale. Internal consistency was acceptable in the American sample, $\alpha = 0.79$.

Toronto Alexithymia Scale 20 (TAS-20; Bagby et al., 1994; see Appendix L). Mothers completed the Difficulty Identifying Feelings subscale (7 items; e.g., “When I am upset, I don’t know if I am sad, frightened, or angry.”) and the Difficulty Describing Feelings subscale (5 items; e.g., “It is difficult for me to find the right words for my feelings.”). Items are rated from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating lower emotional awareness, and thus I recoded the scores so that higher scores indicated higher emotional awareness. The scores of each subscale were computed by averaging each item in each subscale. The Chinese version of TAS-20 was translated and examined for reliability and validity (Zhu et al., 2007), so I used this version in the Chinese questionnaires. In the American sample, internal consistency was good for the Difficulty Identifying Feelings subscale, $\alpha = 0.92$, and the Difficulty Describing Feelings subscale, $\alpha = 0.84$. In the Chinese sample, internal consistency was good for the Difficulty Identifying Feelings subscale, $\alpha = 0.85$, and acceptable for the Difficulty Describing Feelings subscale, $\alpha = 0.62$.

Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; see Appendix O). Mothers completed a 10-item ERQ to assess their use of suppression (4 items; e.g., “I control my emotions by not expressing them.”) and reappraisal (6 items; e.g., “When I want to feel more positive emotion, I change the way I’m thinking about the situation.”). Each item is rated on a 7-point scale (1 = strongly disagree to 7 = strongly agree). Higher scores indicate more use of

suppression and reappraisal. In the American sample, internal consistency was good for both reappraisal, $\alpha = .88$, and suppression, $\alpha = .81$. In the Chinese sample, internal consistency was good for reappraisal, $\alpha = .88$, and acceptable for suppression, $\alpha = .74$. A score of suppression and a score of reappraisal were computed by averaging the items in each subscale.

Results

Reliability and Validity of the Translated Questionnaires

To assess the factor structure of the subscales of the PBACE and DERS in Chinese, confirmatory factor analyses were conducted. Cronbach α coefficients, mean inter-item correlation coefficients, and item-to-total correlation coefficients were examined to evaluate the internal reliability of these questionnaires. Construct validity was evaluated by the association of PBACE and MESQ and the correlation of DERS and TAS-20.

Confirmatory Factor Analyses. Confirmatory factor analyses (CFA) were conducted to assess the validity of the factor structure of the three subscales of PBACE and the emotional clarity subscale of DERS. CFA were also tested to assess the measurement invariance of the items in each of the questionnaires across culture.

PBACE. I first tested the three-factor structure of PBACE in the Chinese sample. The model provided poor fit, $\chi^2(116, N = 163) = 224.63, p < .001, RMSEA = .08, CFI = .84, SRMR = .10$, indicating that the three-factor solution may not be valid for the Chinese version of PBACE. Since the subscales were already developed in the original PBACE (see Appendix C for the scoring of PBACE), I then tested a one-factor structure for each subscale. In the value of positive emotions subscale, item 41 was removed for a good model fit, $\chi^2(2, N = 163) = .59, p = .75, RMSEA = .00, CFI = 1.00, SRMR = .01$ (see Figure 2). For the value of negative emotions subscale, a one-factor solution provided a good model fit, $\chi^2(14, N = 163) = 18.82, p = .17,$

RMSEA = .05, CFI = .94, SRMR = .05. However, the factor loadings were low for item 6, item 26, and item 42 and the variances in each item that were not explained by the latent construct were large (see Figure 3). Additionally, the R^2 , which indicates the variance in the item explained by the latent construct, for item 6 and item 42 were insignificant. Removing items with low factor loadings resulted in poor model fit, so those items were kept. A one-factor solution with residual covariance provided good model fit for the parental guidance subscale, $\chi^2(2, N = 163) = .49, p = .78, RMSEA = .00, CFI = 1.00, SRMR = .01$ (see Figure 4).

Measurement invariance was then tested for each subscale across culture. After removing item 41, the scalar model provided good fit, $\chi^2(10, N = 327) = 13.86, p = .18, RMSEA = .05, CFI = .98, SRMR = .09$, for the value of positive emotions subscale. The chi-square difference test showed that the scalar model did not fit significantly less well than the metric model, $\Delta \chi^2(\Delta 3) = 3.99, p = .26$. For the value of negative emotions subscale, a metric model provided good fit $\chi^2(34, N = 327) = 45.32, p = .09, RMSEA = .05, CFI = .93, SRMR = .07$, but a scalar model did not provide good fit, $\chi^2(40, N = 327) = 154.98, p < .001, RMSEA = .13, CFI = .33, SRMR = .12$. The chi-square difference test showed that the scalar model fit significantly less well than the metric model, $\Delta \chi^2(\Delta 6) = 339.67, p < .001$. These results demonstrated that the factor structure of the value of negative emotions subscale is equal across the two groups, but the scores cannot be compared across groups. For the parental guidance subscale, item 45 was contributing to measurement variance, and therefore this item was removed. After removing this item, a scalar model providing good model fit was fitted, $\chi^2(10, N = 327) = 13.26, p = .21, RMSEA = .05, CFI = .98, SRMR = .07$. The chi-square difference test showed that the scalar model did not fit significantly less well than the metric model, $\Delta \chi^2(\Delta 3) = 3.40, p = .33$.

Since three out of seven items in the value of negative emotions subscale had low factor loadings, and a scalar model for measurement invariance could not be obtained, this subscale

was excluded from the validity test of factor structure and was not used in further analyses. I then tested the validity of the two-factor structure with the items demonstrated measurement invariance in the Chinese sample. The two-factor structure model had good model fit, $\chi^2 (18, N = 163) = 24.34, p = .14, RMSEA = .05, CFI = .98, SRMR = .04$.

DERS. A one-factor solution was tested for the emotional clarity subscale. This model did not provide a good model fit, $\chi^2 (5, N = 157) = 16.19, p < .01, RMSEA = .12, CFI = .91, SRMR = .07$. Item 7 (see Appendix E for the scoring of DERS) had a low factor loading and the R^2 for this item was .05 and insignificant. After removing this item, the one factor structure model provided a good fit, $\chi^2 (2, N = 157) = 1.70, p = .43, RMSEA = .00, CFI = 1.00, SRMR = .07$ (see Figure 5).

Measurement invariance was then tested. A scalar model provided a poor fit, $\chi^2 (8, N = 320) = 12.77, p = .12, RMSEA = .06, CFI = .98, SRMR = .06$. By setting the mean of item 5 not to be equal across sample, the model had good fit, $\chi^2 (7, N = 320) = 4.53, p = .72, RMSEA = .00, CFI = 1.00, SRMR = .04$, and partial invariance was obtained. There were only four items in the subscale, so item 5 was not excluded to maintain reliability. The following analyses used the retained items from PBACE and DERS.

Internal Reliability and Homogeneity. Cronbach α coefficients, mean inter-item correlation coefficients, and item-to-total correlation coefficients were examined to evaluate the internal reliability of the subscales of the PBACE and DERS in Chinese (see Table 1). The Cronbach α coefficient larger than .70 was considered acceptable for internal consistency (George & Mallery, 2003) and all the subscales studied had α coefficient larger than .70. The homogeneity of the subscales was confirmed by the mean inter-item correlations. A range from .2 to .5 for the mean inter-item correlations was suggested by Clark and Watson (1995).

Although the mean inter-item correlation for the value of positive emotions was higher than .5, the construct of the value of positive emotions is narrow. Therefore, .62 was acceptable. The items in each subscale met the criterion that at least 50% of the items had the item-total correlations in the range of .3 to .7 (Carmines, 1979).

Construct Validity. To obtain evidence of validity for the emotional clarity subscale of DERS, relations between emotional clarity subscale and two subscales of TAS-20 were calculated (see Table 2). Mothers who were clearer about their own emotions were also better able to identify and describe their emotions. Construct validity of the emotional clarity subscale was suggested by the above associations. To obtain evidence of validity for the value of positive emotions subscale and parental guidance subscale of PBACE, relations between PBACE subscales and emotion coaching subscale of MESQ were calculated (see Table 3). Mothers who believed in guiding children's emotions also believed in getting close with children and problem solving when children were anger or sad. On the other hand, mothers' value of positive emotions was not related to their beliefs about coaching children when they have negative emotions. These results suggested construct validity of PBACE subscales. The results from CFA, internal reliability, and construct validity confirmed the reliability and validity of these subscales in Chinese and suggested that they can be used to make meaningful comparisons across Chinese and American cultures.

Preliminary Analyses

Following MacCallum Browne, and Sugawara's (1996) methods of power analysis to calculate the required sample size based on the fit index, RMSEA, I calculated that the required sample size for the current study is 166 using Preacher and Coffman's (2006) online software. The sample of 327 mothers was above the necessary sample size.

Data screening were conducted after the data collection was finished. Descriptive data analyses were used to check that data were in the proper range and to check normality. Parents' role in guiding children's emotions from PBACE showed high skewness and kurtosis scores and was further checked for normality. Normal Q-Q plot demonstrated that parents' role in guiding children's emotions was not normally distributed in both samples. Log transformations were performed, but the data was still not normal. Since Mplus has a built-in estimator, MLR, that is robust to non-normality, I decided to not use the transformed data. MLR estimation is a maximum likelihood estimation with robust standard errors computed using a sandwich estimator (Muthén & Muthén, 1998-2015). The chi-square test using MLR was scaled by a correction method recommended by Yuan and Bentler (2000).

Descriptive statistics were presented in Table 4 and Figure 6, and correlations among study variables can be found in Table 5. In both samples, value of positive emotions and parental guidance correlated with each other. In addition, emotional clarity, identifying feelings, and describing feelings were correlated with each other in both samples. In the Chinese sample, use of reappraisal was positively correlated with use of suppression, whereas, they were not correlated in the American sample. Potential covariates were also examined. T-tests were conducted to examine whether the study variables were different based on child sex, maternal ethnicity, maternal race, mother's marriage status, mother's working status, and if mother is a single child. Except for whether mother herself was a single child or not, the study variables did not differ based on these demographic variables. Child age, family annual income, and mother's highest degree earned were treated as continuous variables; therefore, correlations between the study variables were examined (see Table 6). Since child age, family annual income, mother's

highest degree earned and whether mother is a single child was related to the study variables, these variables were entered to the proposed model as covariates.

Statistical Analyses

Full structural equation models were estimated using MLR estimation in MPlus 7.11. The maximum likelihood was chosen because it produces estimates that are unbiased, consistent and efficient and it is scale free and scale invariant. The missing data were estimated assuming normality. Chi-squares, root mean square error of approximation (RMSEA), comparative fit index (CFI), and Standardized Root Mean Square Residual (SRMR) were reported to indicate the model fit. Small chi-square value and the insignificant p-value would suggest a good fit model. The RMSEA value of less than .05 would indicate that the model fits well. The value of CFI should be greater than .9 and the SRMR value should be less than .10 to indicate a good model fit. All the fit indexes were reported because they are sensitive to model misspecification as Hu and Bentler (1998) recommended, and because the maximum likelihood estimation method was used and the sample size was relatively small.

Measurement Models

Measurement models were tested to examine model fit in each sample. Describing feelings and identifying feelings from TAS-20 and emotional clarity from DERS were used to construct a latent variable of emotional awareness. In addition, value of positive emotions and parental guidance subscales from PBACE and emotion coaching subscale from MESQ were tested to construct a latent variable of emotion coaching. In the American sample, the model fit was good, $\chi^2 (7, N = 164) = 8.38, p = .30, RMSEA = .04, CFI = 1.00, SRMR = .03$. Conversely, in the Chinese sample, the measurement model provided a poor fit with the data, $\chi^2 (7, N = 163) = 14.80, p < .05, RMSEA = .08, CFI = .95, SRMR = .06$. The factor loading for emotion

coaching subscale of MESQ was low. Consequently, emotion coaching subscale of the MESQ was dropped from the model and new measurement models were estimated.

In the American sample, the measurement model (see Figure 7) had a good fit, $\chi^2(3, N = 164) = 2.07, p = .56, RMSEA = .00, CFI = 1.00, SRMR = .02$. The R^2 were .60 for value of positive emotions, .65 for parental guidance, .37 for describing feelings, .50 for identifying feelings, and .83 for emotional clarity. In the Chinese sample, the measurement model (see Figure 8) also provided a good fit, $\chi^2(3, N = 163) = 3.71, p = .29, RMSEA = .04, CFI = 1.00, SRMR = .02$. The R^2 were .27 for value of positive emotions, .35 for parental guidance, .24 for describing feelings, .32 for identifying feelings, and .85 for emotional clarity. In both measurement models, the residuals of describing feelings and identifying feelings were allowed to covary, because they were from the same questionnaire.

Since both measurement models had a good fit, measurement invariance was further tested by constraining the factor loadings to be the same across the two samples (metric model). The metric model had good fit, $\chi^2(9, N = 327) = 6.58, p = .68, RMSEA = .00, CFI = 1.00, SRMR = .03$, and did not significantly worsen fit, compared to a model without constraining the factor loadings, $\Delta\chi^2(\Delta 3) = 1.00, p = .80$. I further tested a stricter model by constraining both the factor loadings and the intercepts of the factors to be equal across the two samples (scalar model). The scalar model provided poor fit, $\chi^2(12, N = 327) = 21.06, p < .05, RMSEA = .07, CFI = .97, SRMR = .06$. After examining the source of non-invariance, I found that constraining the intercept of emotional clarity from DERS to be equal across the two samples was the reason for the poor model fit. Then I fit a model freely estimating the intercepts of emotional clarity. This model provided a good fit, $\chi^2(11, N = 327) = 9.39, p = .59, RMSEA = .00, CFI = 1.00,$

SRMR = .03, and had a significantly better fit, $\Delta \chi^2 (\Delta 1) = 18.93, p < .001$, than the model setting the intercepts of emotional clarity to be equal across both samples.

In the scalar model, the means of emotion coaching and emotional awareness in the Chinese sample were set to be zeros and variances were set to be 1. The mean of emotion coaching in the American sample was $-.93, p < .001$. The mean of emotional awareness was $.58, p < .001$, in the American sample.

Full Structural Equation Models

Full structural equation models as proposed were estimated separately in each sample. Child age was entered in the American sample model as a covariate. Maternal education, family income, and mother's single child status were entered in the Chinese sample model as covariates.

In the American sample, the model estimated as the proposed model did not provide a good fit, $\chi^2 (14, N = 164) = 32.18, p < .01, RMSEA = .09, CFI = .95, SRMR = .05$. After examining the residual variance-covariance structure, I found that the variances between suppression and identifying feelings of TAS-20 and between suppression and describing feelings of TAS-20 were not captured by the model. A second model was fitted, allowing suppression and the residual of identifying feelings and suppression and the residual of describing feelings to covary (see Figure 9). This model provided good fit, $\chi^2 (12, N = 164) = 11.10, p = .52, RMSEA = .00, CFI = 1.00, SRMR = .03$. In the Chinese sample, the model estimated as the proposed model provided a good fit (see Figure 10), $\chi^2 (23) = 18.45, p = .73, RMSEA = .00, CFI = 1.00, SRMR = .03$.

Multi-Group Analyses

Multi-group analyses were conducted to examine whether the strengths of the relations among the study variables were the same across the two samples. Since allowing suppression to

covary with the residuals in the American sample may make the model not comparable to the Chinese sample, it was not included in the multi-group analyses. All the covariates were added to the multi-group analyses. The first model was fitted freely estimating every path in the model and across the two samples. This model had a good fit, $\chi^2(47) = 59.43$, $p = .11$, RMSEA = .04, CFI = .98, SRMR = .04. I then fitted another model setting the path from maternal emotional awareness to emotion coaching to be equal across the two samples. This model also provided a good fit, $\chi^2(48) = 60.52$, $p = .11$, RMSEA = .04, CFI = .97, SRMR = .05, and chi-square difference test indicated that this model was not significantly worse than the first model, $\Delta\chi^2(\Delta1) = 1.11$, $p = .29$. I further fitted a model adding the path from reappraisal to emotion coaching setting to be equal across the two samples and this third model (see Figure 11) had good fit, $\chi^2(49) = 63.33$, $p = .08$, RMSEA = .04, CFI = .97, SRMR = .05. Compared to the first model, this model was not significantly worse, $\Delta\chi^2(\Delta2) = 3.75$, $p = .15$. The fourth model adding to the third model set the path from reappraisal to emotional awareness to be equal across the two samples. This model did not provide a good fit, $\chi^2(50) = 70.63$, $p < .05$, RMSEA = .05, CFI = .96, SRMR = .07. The chi-square difference tests showed that this model was significantly worse, compared to the first model, $\chi^2(\Delta3) = 9.74$, $p < .05$.

Mediation Effects

Mediation effect of maternal emotional awareness of the relation of reappraisal to emotion coaching was tested in the third model of the multi-group analyses. In the American sample, mediation analyses showed that reappraisal had a significant indirect effect on emotion coaching via maternal emotional awareness, $B = .15$, $p < .05$. Bias-corrected 95% confidence intervals based on 5000 bootstrapped samples were [.02, .34]. In the Chinese sample, mediation

analyses showed that reappraisal did not have a significant indirect effect on emotion coaching via maternal emotional awareness.

Since suppression was not included in the multi-group analyses, the mediation effect of emotional awareness of the relation of suppression to emotion coaching was examined separately in each sample. In the American sample, suppression had a significant indirect effect on emotion coaching via maternal emotional awareness, $B = -.18, p < .01$. Bias-corrected 95% confidence intervals based on 5000 bootstrapped samples were $[-.46, -.03]$. In the Chinese sample, mediation analyses showed that suppression had a significant indirect effect on emotion coaching via maternal emotional awareness, $B = -.25, p < .05$. Bias-corrected 95% confidence intervals based on 5000 bootstrapped samples are $[-.75, -.03]$.

Discussion

The purpose of the current study was to examine the cross-cultural differences in the role of maternal emotional awareness and maternal use of emotion regulation strategies, including reappraisal and suppression, as determinates of maternal emotion coaching. The results indicated the importance of maternal emotion regulation strategies, including reappraisal and suppression, and emotional awareness in determining maternal emotion coaching in both Chinese and American samples; however, emotion coaching in this study did not include mothers' views about negative emotions. Cultural differences and similarities in the examined relations were found. Maternal emotional awareness was associated with their emotion coaching in both samples and the strength of the association was not different across the two samples. However, the relations of reappraisal and suppression to emotional awareness and emotion coaching were different across Chinese and American samples. Emotional awareness mediated the relation of reappraisal to emotion coaching only in the American sample. Emotional

awareness was a mediator of the relation of suppression to emotion coaching in both the Chinese and American sample, but the strength of the association could not be tested.

Since PBACE and DERS were translated into Chinese for this study, the reliability and validity of the factor structure were tested. A three-factor solution could not be obtained for the Chinese version of PBACE. Three items in the value of negative emotions subscale had low factor loadings and should not be used to construct a latent construct. The reason the factor structure could not be achieved for the value of negative emotions subscale may be that Chinese mothers' beliefs about negative emotions, specifically anger in this case, were complex. On one hand, they rated relatively low on items describing anger as motivation and items stating expressing anger as a good thing. Their view of anger was also consistent with the cultural belief that the expression of emotions, especially negative emotions that may disrupt interpersonal relations, should be controlled (Russell & Yik, 1996). This belief that Chinese mothers hold about negative emotions may also be the reason why the item involving teaching children to deal with distress and upsetting feelings did not go together with other items in the parental guidance subscale.

On the other hand, Chinese mothers rated relatively high on items that acknowledge anger as useful, indicating that Chinese mothers did not necessarily consider the feeling of anger itself as bad or useless. Chinese mothers' recognition of the positive aspects of anger was not what I expected and worth exploring further in future research. These results indicated that Chinese mothers' beliefs about anger were complicated, and because of this complexity, there was a lack of equivalence across cultures for the value of negative emotions. Contrary to the Chinese mothers' view of negative emotions, previous research was able to develop measurement invariance for several items in the value of negative emotions across different

ethnicity groups within American culture (Halberstadt et al., 2013). Therefore, to make meaningful comparisons between Chinese and American cultures, we need to further study anger and other negative emotions in Chinese culture.

Because equivalence of value of negative emotions could not be obtained across American and Chinese cultures, the concept of emotion coaching in this study did not include the value of negative emotions. The exclusion of negative emotions in the current study made the concept of emotion coaching qualitatively different from emotion coaching in other previous studies (e.g., Dunsmore et al., 2013; Gottman et al., 1996; Havighurst, Wilson, Harley, Prior, & Kehoe, 2010; Katz & Windecker-Nelson, 2004; Ramsden & Hubbard, 2002; Shortt et al., 2010). For example, Gottman et al. (1996) conceptualized emotion coaching as parents' thoughts and beliefs about negative emotions, including anger and sadness, and their perceptions of how to deal with these negative emotions. Additionally, Dunsmore et al. (2013) theorized emotion coaching to include both positive and negative emotions as well as parents' views about their role in guiding children's emotions. Since mothers who value positive emotions may not necessarily also value negative emotions, findings from this study may not be comparable to previous studies which included negative emotions. Further studies are needed to develop a measure to assess negative emotions cross-culturally.

In addition to Chinese mothers' complicated view about negative emotions, their beliefs about being proud were different from those of American mothers. According to their responses, the importance of children being proud of a job well done was not equivalent to the importance of children being happy or joyful in Chinese mothers' mind. In contrast, American mothers' beliefs about being proud, happy and joyful were related as a unidimensional factor of beliefs about positive emotions. Kitayama, Mesquita, and Karasawa (2006) proposed the idea that

socially disengaging emotions, which are the emotions that emphasize individuals and separate one another, are less valued in the Eastern cultures than in the Western cultures. Consistent with this idea, the results of this study demonstrated that the value of proud, one of the socially disengaging emotions, did not relate to the value of joy and happiness in the Chinese sample. Moreover, the results also demonstrated that mothers' beliefs about joy and happiness had similar structures across the two cultures, which indicated that joy and happiness may serve an evolutionary function (Fredrickson, 1998) and the appreciation of these emotions may be universal. These findings suggest that when studying emotions cross-culturally, dividing emotions into two categories, positive emotions and negative emotions, may not be enough and may lead to mixed conclusions.

Before comparing mean scores across both samples, measurement invariance of emotional awareness and emotion coaching was established, indicating psychometric equivalence of these two constructs across the Chinese and American sample. As expected, Chinese mothers had lower emotional awareness, on average, than American mothers did. Chinese culture emphasized control of emotions (Russell & Yik, 1996) and the need of controlling and decreasing emotions in the Chinese culture may lead to a lack of desire and necessity to identify and differentiate emotions. Furthermore, the Chinese language has a smaller number of emotion words than English has. Fewer emotion words in Chinese may limit Chinese people's ability to describe and understand their own emotions. This may also be the reason why the subscale of describing emotions in TAS-20 had lower internal consistency in the Chinese sample than in the American sample. Some Chinese people may be willing to reveal their feelings and found it hard to find words to describe them at the same time. Unable to describe

emotions in words, in turn, may result in a lack of cognitive recognition and understanding of the emotions.

Contrary to my expectation, Chinese mothers reported higher emotion coaching than American mothers did. This finding may be because emotion coaching only consists of mothers' beliefs about positive emotions and parental guidance, and mothers' values of negative emotions as one subscale of emotion coaching were excluded from my model. Previous research found that Chinese mothers were more negative when talking about events involving negative emotions than American mothers (Fivush & Wang, 2005). Additionally, American parents who believed in the value of negative emotions was found to have greater encouragement of negative emotions (Lozada et al., 2016). Since in the current study mothers' beliefs about negative emotions were not examined, my findings did not necessarily contradict with previous studies. In terms of mothers' beliefs about parents' role in guiding emotions, Chinese mothers may rate the items, such as "It's a parent's job to teach children how to handle their emotions", higher, because they need to teach and socialize children how to express or even suppress emotions as desired by cultural norms. Because of different display rules of emotions in Chinese and American cultures, similar emotion coaching philosophies may bring about distinct emotion coaching practices.

In both samples, maternal emotional awareness was related to their emotion coaching, with higher emotional awareness predicting higher emotion coaching. Rather than coding emotional awareness and emotion coaching from the same interview as Gottman et al. (1996) did, I used different questionnaire subscales to construct latent variables of emotional awareness and emotion coaching. This finding was consistent with the findings of Gottman et al. (1996), supporting that being aware of one's own emotion is important in facilitating emotion coaching.

Furthermore, the strength of this relation was not significantly different across Chinese and American samples, which indicated that despite of the different cultural values of emotions, a unit increase in emotional awareness was related to the same amount of increase in emotion coaching for both Chinese and American mothers. The reason why cultural values did not relate to this relation may be that the importance and the need of being able to identify, differentiate, and describe their own emotions so that mothers can identify their children's emotions and help them deal with the emotions are equivalent for Chinese and American mothers. Even though different cultures hold diverse cultural beliefs about emotions, the importance of emotional awareness may be universal.

In the American sample, reappraisal was not correlated with suppression, which was consistent with previous findings. Previous research had found that the use of reappraisal and the use of suppression were often not related (Bariola, Hughes, & Gullone, 2012; Kimhy et al., 2016; Meyer, Raikes, Virmani, Waters, & Thompson, 2014), or even negatively related (Eastabrook et al., 2014). However, in the Chinese sample, more use of reappraisal was related to more use of suppression. Research, which focused on Cultures emphasizing moderation of emotion, also found similar correlations (Lu, Tao, Hou, Zhang, & Ren, 2016; Subic-Wrana et al., 2014; Xia, Gao, Wang, & Hollon, 2014; Zhao & Zhao, 2015). These results demonstrated that the use of suppression might not be maladaptive if control of emotions is desired in the culture. Individuals, who need to control their emotions as desired by cultural norms, may need to use reappraisal in the emotion generating process paired with the use of suppression after the emotions are generated to achieve their goal of emotion regulation. These individuals, who are able to flexibly use both reappraisal and suppression as they need, may generally have competent

emotion regulation ability. Suppression may only be problematic for those who automatically engage in using it.

In the American sample, mothers, who used reappraisal more often, reported higher emotion coaching. As I proposed, the use of reappraisal may allow mothers to engage with their own emotions and consider distal factors relating to the emotion-eliciting situations. Therefore, mothers, who used reappraisal frequently, may also be able to analyze the emotion arousal events for their children. On the other hand, the use of reappraisal and suppression did not directly predict maternal emotion coaching in the Chinese sample. The reason why the use of suppression was not directly related to emotion coaching may be that the use of suppression is not always maladaptive in Chinese culture. If the use of suppression is automatic, it may relate to less emotion coaching. However, if the mothers choose to use suppression as the situation demands, they may be able to coach their children how to suppress their emotion appropriately. As to the use of reappraisal, since reappraisal sometimes paired with the use of suppression, suppression, which is used after the emotion responses were generated, may not enable mothers to use the information they obtained using reappraisal as the emotion events happened to their children.

In the American samples, mothers, who used reappraisal as an emotion regulation strategy more frequently, reported higher emotional awareness. Conversely, this relation was not found in the Chinese sample. As discussed earlier, the use of reappraisal and suppression was not related to each other in the American sample. Using reappraisal alone allows American mothers to engage more with their emotions, examining the nature, source, and consequences of their emotions more. In both samples, use of suppression was related to less emotional awareness, because suppressing of emotion stops mothers from further examining their

emotions. This suggested that while the use of suppression may not have a negative impact on emotion coaching, frequent use of suppression may give rise to low emotional awareness in both cultures.

In the American sample, emotional awareness mediated the relation of reappraisal to emotion coaching, whereas the mediation effect of emotional awareness in the relation of reappraisal to emotion coaching was not significant in the Chinese sample. American mothers, who used reappraisal more often, were more consciously aware of their emotion and more capable of describing and communicating emotions to other people. This ability, in turn, may allow them to identify emotions in their children and also talk with their children about strategies to deal with their emotions. In the Chinese sample, more frequent use of reappraisal was not related to higher emotional awareness. In both American and Chinese samples, emotional awareness mediated the relation of suppression to emotion coaching. The more frequent use of suppression may limit mothers from further analyzing the causes and consequences of the emotions and lead to less emotional awareness, which in turn may be associated with less emotion coaching. These findings supported emotional awareness to be an important mechanism through which use of emotion regulation strategies is related to emotion coaching in both cultures.

Strengths, Limitations, and Future Directions

Although this study had many important findings, there are a few limitations to address. First, the test-retest reliability was not completed for the Chinese version of PBACE and DERS. I contacted the teachers about asking mothers to fill out the PBACE and DERS three weeks apart from the first time they completed the questionnaires. The teachers expressed that the mothers

did not want to be contacted again, because the questionnaires at the first completion were too long.

Second, both samples lacked variability related to race and ethnicity. The Chinese sample was recruited from one province of China, and the American sample was predominately White. There are many sub-cultures, which may have different views of emotions, in both countries. Hence, before generalizing the results to a larger population, this study needs to be replicated in different samples.

Third, the assessment of maternal emotion coaching did not include mothers' beliefs about negative emotions and it was self-reported. Maternal emotion coaching only included mothers' beliefs about positive emotion and their role in guiding children's emotions. Their views about negative emotions were excluded because the factor loading and the model fit showed that it should not be used to construct the emotion coaching latent variable. In addition, this study only examined self-reported emotion coaching philosophies. Mothers' beliefs about emotion coaching may not necessarily reflect their practice of emotion coaching. Future research should include mothers' value of negative emotions and observational measures of mothers' emotion coaching practices.

Fourth, the relation between maternal emotional awareness and emotion regulation strategies may be bidirectional and the bidirectionality was not examined in this study. For example, the use of suppression may lead to less emotional awareness because it stops individuals from understanding their emotions. Less emotional awareness, in turn, may also cause more frequent use of suppression. Since different emotions have different motivational and regulatory functions (Izard et al., 2011), one's ability to identify specific emotions may assist the selection and the use of different emotion regulation strategies (Schwarz & Clore, 1996;

Stegge & Terwogt, 2007; Quigley & Barrett, 1999). Failure to identify emotions may lead to automatic use of suppression, because suppression does not require conscious recognition of any emotions. This study is a cross-sectional study, so I can only analyze one direction of this relation. Future longitudinal studies should examine the bidirectional relation.

Overall, the findings of this study supported that maternal emotional awareness and use of emotion regulation strategies are important determinants of maternal emotion coaching, adding to the current literature that largely focused on the relation between emotion coaching and child outcome and ignored the influence of characteristics of socializers on emotion coaching. These results suggested that training mothers to use adaptive emotion regulation strategies may increase their emotional awareness and eventually facilitate their emotion coaching.

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Table 1

Internal Consistency Statistics for the Subscales of PBACE and DERS

	Cronbach α	Mean Inter-item Correlations	Range of Item-to-total Correlations
<u>PBACE</u>			
Value of Positive Emotions	.83	.62	.54 - .83
Value of Negative Emotions	.61	.19	.15 - .46
Parental Guidance	.77	.48	.43 - .71
<u>DERS</u>			
Emotional Clarity	.73	.40	.36 - .65

Table 2

Correlations between Emotional Clarity Subscale of DERS and TAS-20 Subscales

	Identifying Feelings	Describing Feelings
Emotional Clarity	.53**	.46**

Notes. ** $p < .01$.

Table 3

Correlations between PBACE subscales and an MESQ subscale

PBACE	Emotion Coaching of MESQ
Value of Positive Emotions	.11
Value of Negative Emotions	.33**
Parental Guidance	.32**

Notes. ** $p < .01$.

Table 4

Descriptive Statistics

	<i>N</i>	<u>Chinese Sample</u>			
		<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
PBACE					
Value of positive emotions	163	5.66	.69	1.00	6.00
Value of negative emotions	163	4.18	.78	1.29	5.86
Parental guidance	163	5.52	.65	2.75	6.00
MESQ					
Emotion coaching	163	3.57	.58	1.86	5.00
DERS					
Emotional clarity	157	3.96	.65	2.25	5.00
TAS-20					
Identifying feelings	149	3.60	.75	2.00	5.00
Describing feelings	149	3.40	.65	1.80	5.00
ERQ					
Reappraisal	142	4.48	1.36	1.00	7.00
Suppression	140	3.61	1.27	1.00	7.00
	<i>N</i>	<i>M</i>	<u>American Sample</u>		
			<i>SD</i>	<i>Min</i>	<i>Max</i>
PBACE					
Value of positive emotions	164	4.97	.94	2.25	6.00
Value of negative emotions	164	4.23	.76	1.71	6.00
Parental guidance	164	4.85	.98	2.00	6.00
MESQ					
Emotion coaching	162	3.78	.61	1.29	5.00
DERS					
Emotional clarity	163	4.05	.82	2.00	5.00
TAS-20					
Identifying feelings	158	3.96	.99	1.43	5.00
Describing feelings	158	3.79	.94	1.80	5.00
ERQ					
Reappraisal	150	5.10	1.18	1.00	7.00
Suppression	150	3.65	1.48	1.00	6.75

Table 5

Correlations among Study Variables

	1	2	3	4	5	6	7	8	9
1. Value of positive emotions	-	.22**	.57**	.37**	.41**	.34**	.25**	.18**	-.27**
2. Value of negative emotions	.19**	-	.30**	.30**	.05	-.02	-.04	.15	-.02
3. Parental guidance	.30**	.26**	-	.48**	.46**	.37**	.24**	.37**	-.30**
4. Emotion coaching	.11	.33**	.32**	-	.26**	.12	.16**	.36**	-.25**
5. Emotional clarity	.23**	-.13	.26**	-.10	-	.65**	.57**	.28**	-.42**
6. Identifying feelings	.12	-.11	.21**	-.04	.53**	-	.79**	.24**	-.53**
7. Describing feelings	.14	-.09	.11	-.05	.46**	.73**	-	.16*	-.60**
8. Reappraisal	.11	.12	.20*	.18*	.11	.03	.04	-	-.09
9. Suppression	-.11	.13	-.00	.07	-.31**	-.36**	-.35**	.30**	-

Notes. Numbers in the upper corner represented the American sample, and numbers in the lower

corner represented the Chinese sample. * $p < .5$, ** $p < .01$.

Table 6

Correlations among Demographics and Study Variables

	<u>Chinese Sample</u>		
	Child Age	Maternal Education	Family Income
Value of positive emotions	.06	.11	.20**
Parental guidance	-.15	.20*	.14
Emotion coaching	-.01	.05	.05
Emotional clarity	.04	.24**	.19*
Identifying feelings	.04	.22**	.13
Describing feelings	.10	.22**	.12
Reappraisal	-.07	.34**	.31**
Suppression	-.17	.00	-.01
	<u>American Sample</u>		
	Child Age	Maternal Education	Family Income
Value of positive emotions	.14	-.02	.10
Parental guidance	.18*	.04	.09
Emotion coaching	.11	-.08	-.07
Emotional clarity	.21*	.03	.06
Identifying feelings	.07	.02	.16*
Describing feelings	.04	.06	.11
Reappraisal	.07	-.07	-.06
Suppression	-.01	-.05	-.01

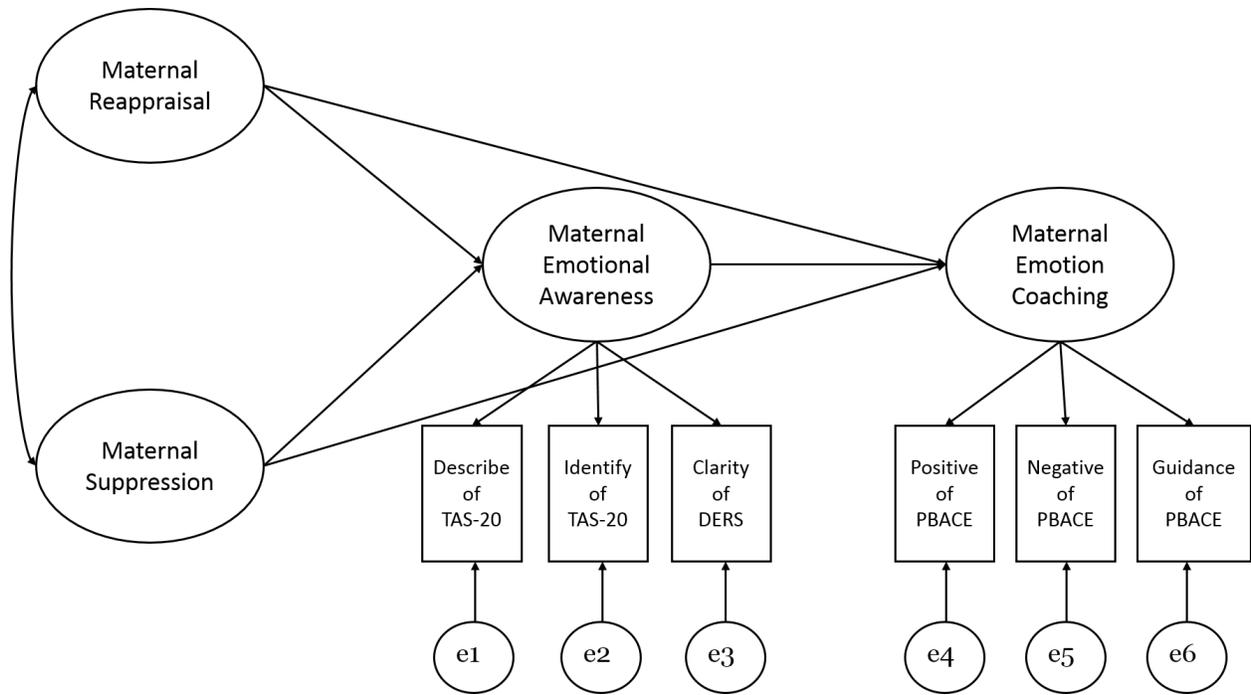


Figure 1. Proposed Model.

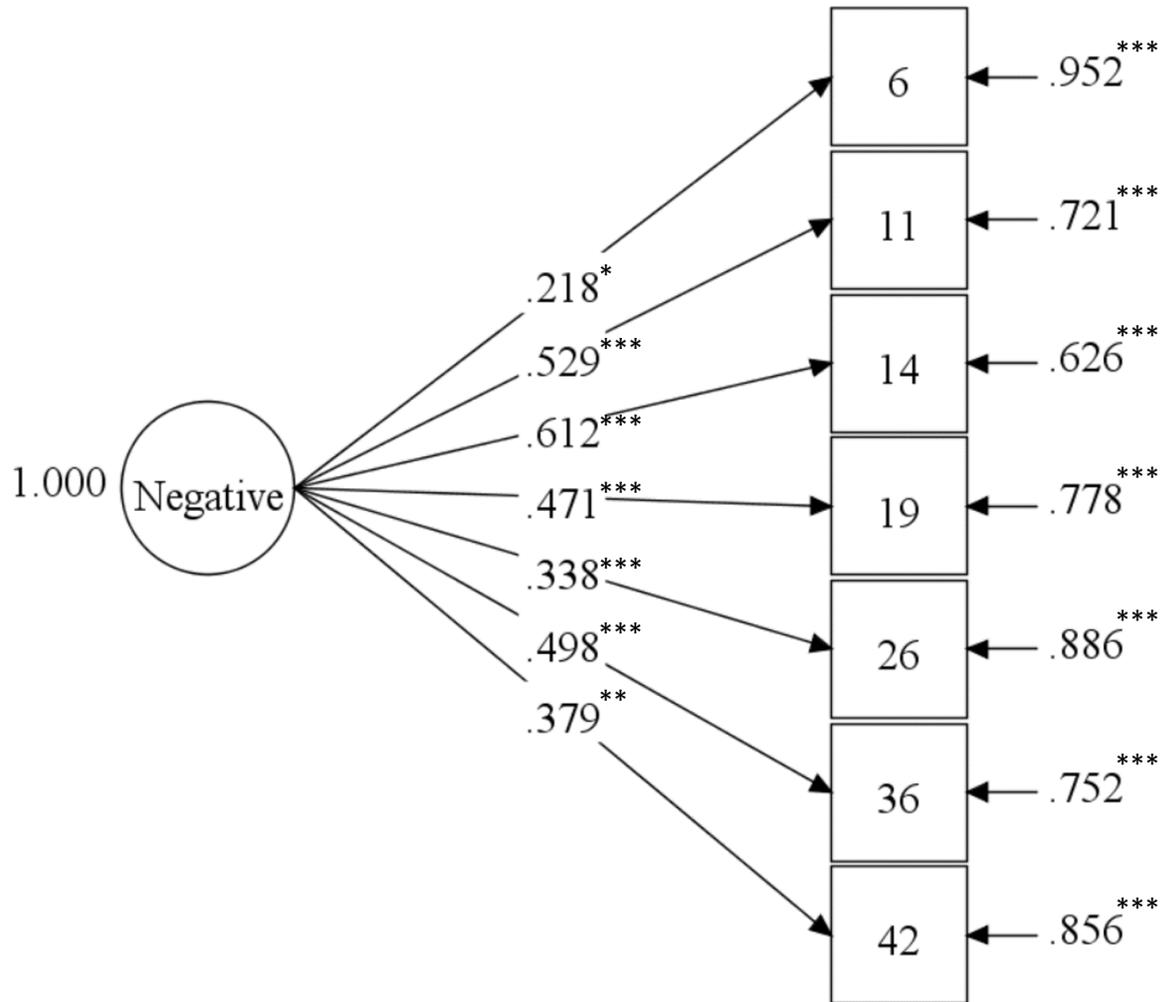


Figure 3. Confirmatory factor analysis of the values of negative emotions subscale of PBACE in Chinese. Standardized coefficients are presented. * $p < .05$, ** $p < .01$, *** $p < .001$.

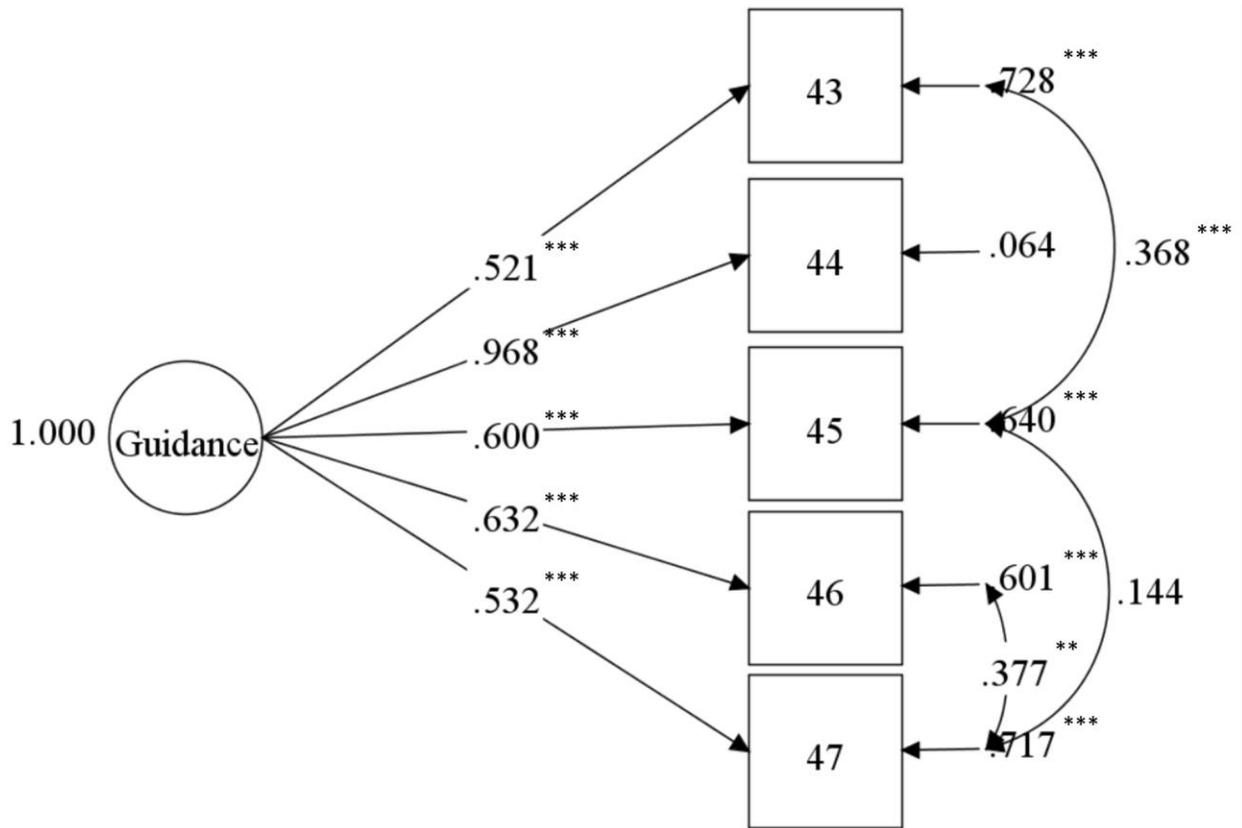


Figure 4. Confirmatory factor analysis of the parental guidance subscale of PBACE in Chinese. Standardized coefficients are presented. * $p < .05$, ** $p < .01$, *** $p < .001$.

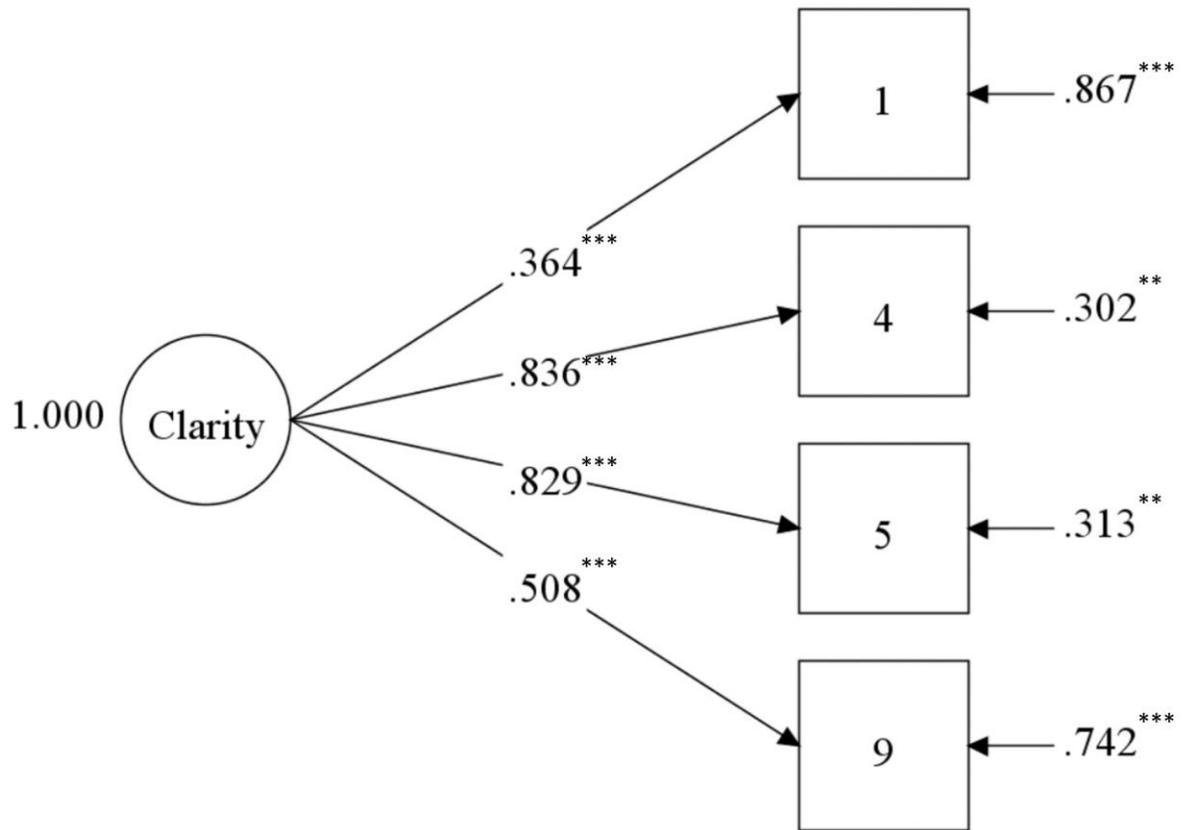


Figure 5. Confirmatory factor analysis of the emotional clarity subscale of DERS in Chinese. Standardized coefficients are presented. ** $p < .01$, *** $p < .001$.

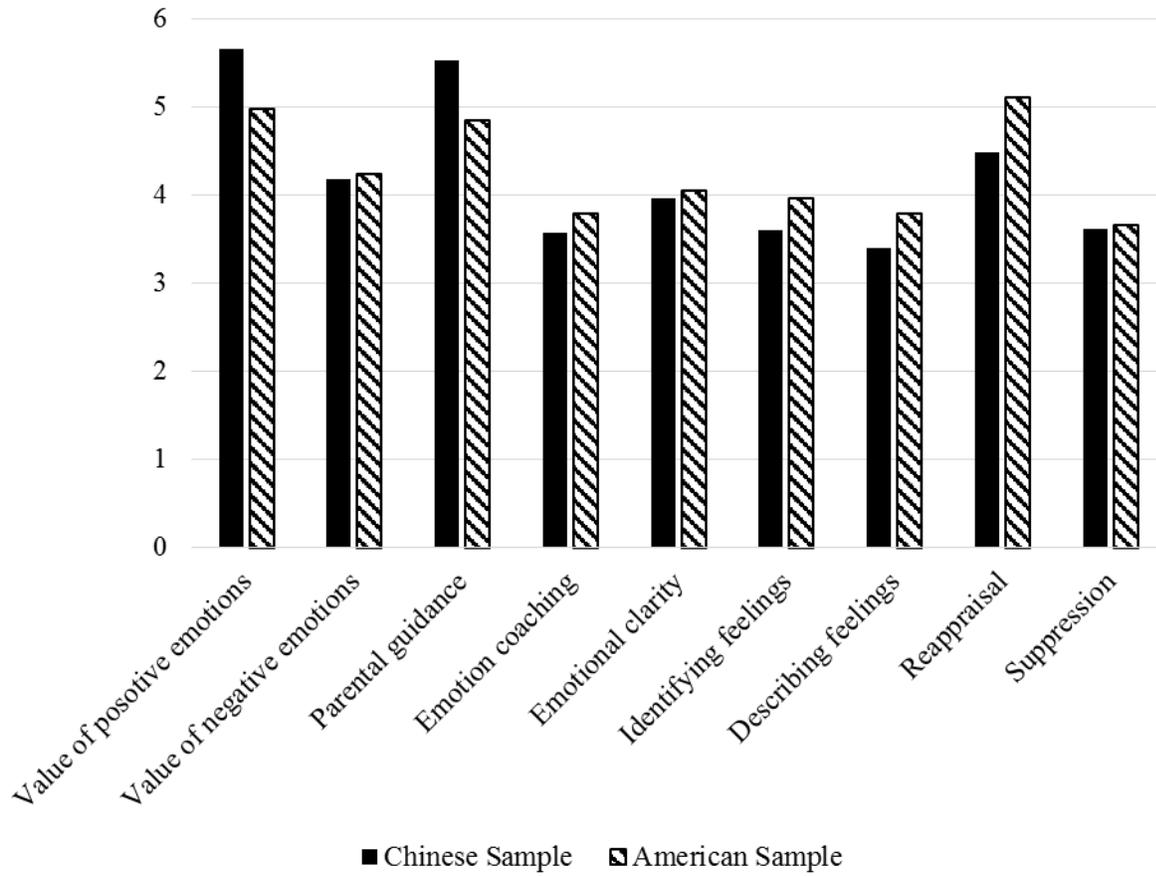


Figure 6. Mean scores of the study variables in the Chinese and American samples.

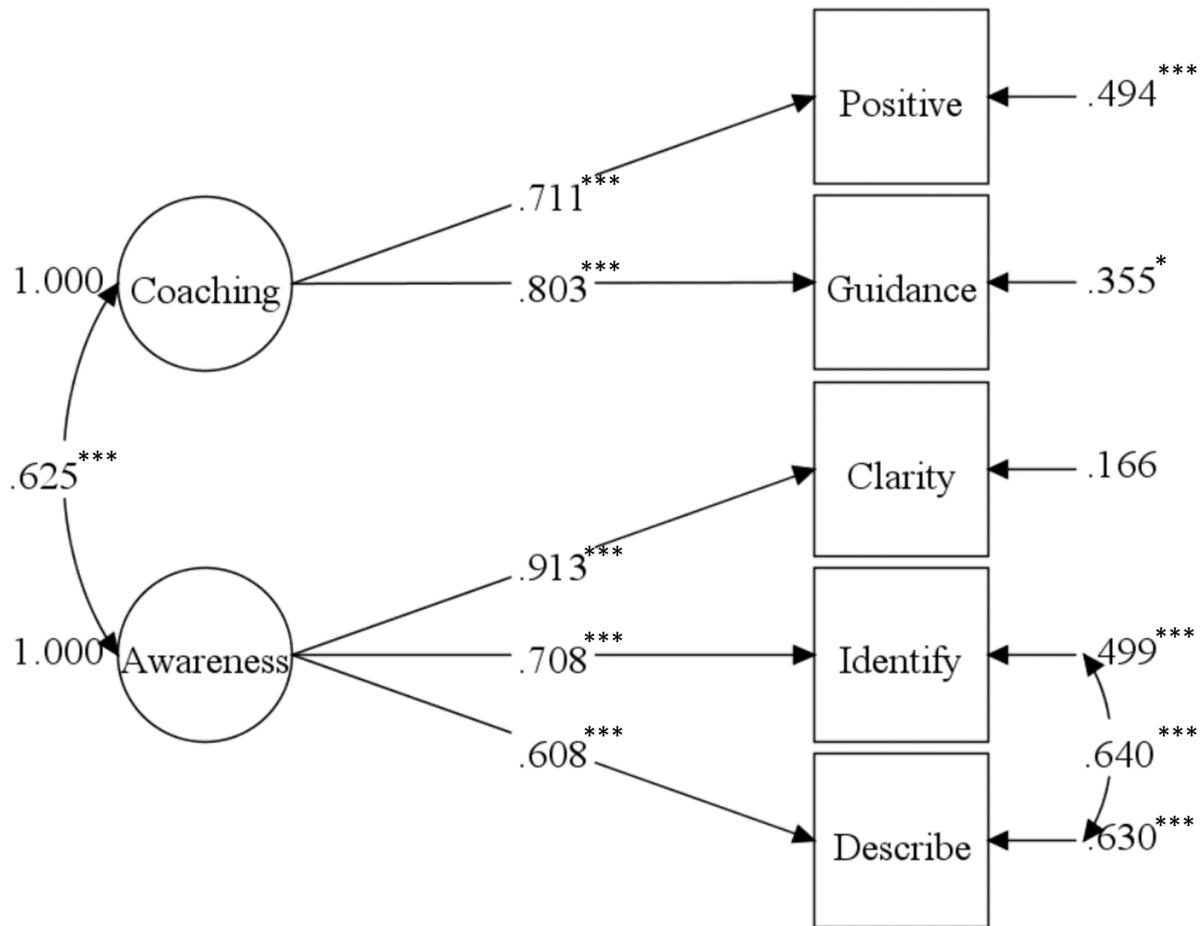


Figure 7. The measurement model of emotion coaching and emotional awareness in the American sample. Standardized coefficients are presented. * $p < .05$, ** $p < .01$, *** $p < .001$.

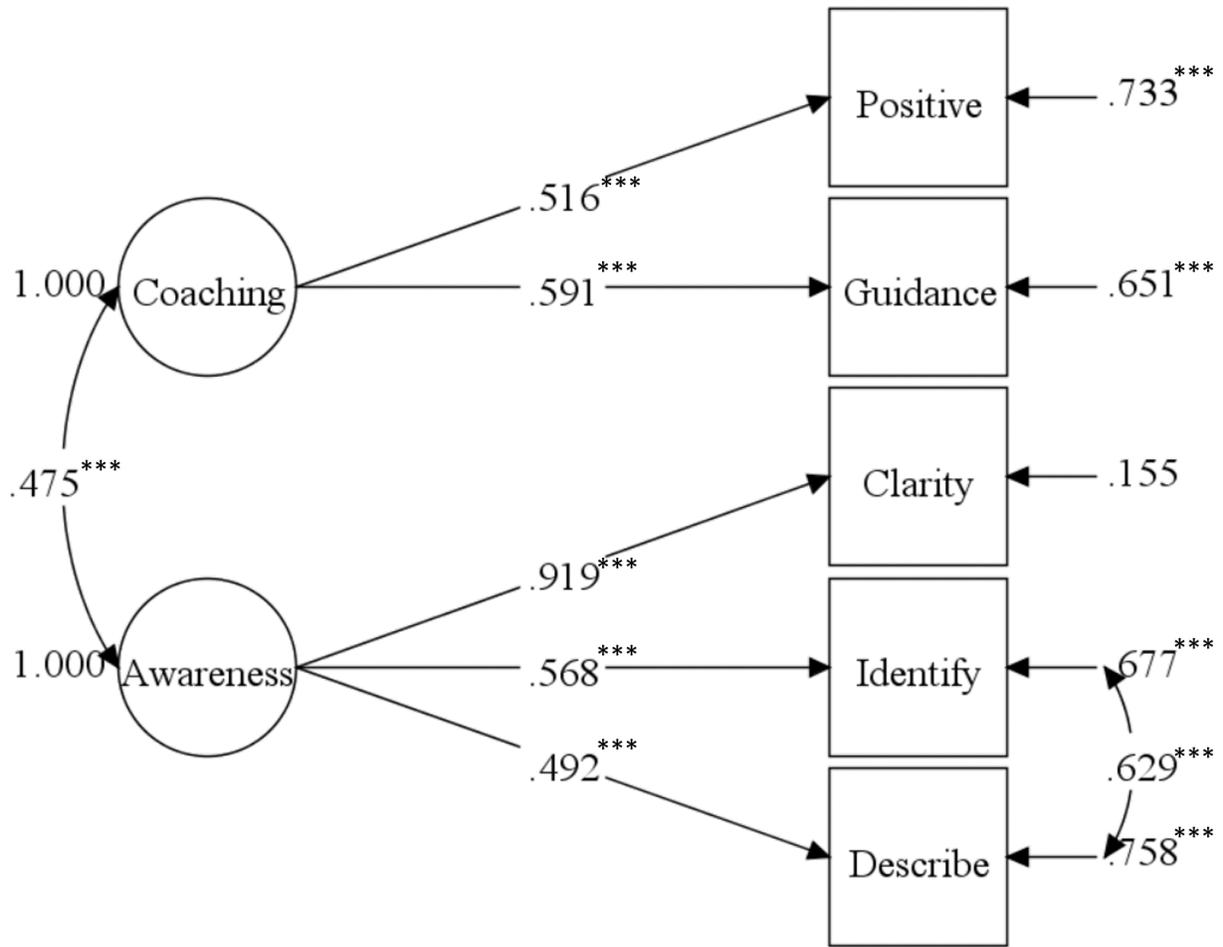


Figure 8. The measurement model of emotion coaching and emotional awareness in the Chinese sample. Standardized coefficients are presented. *** $p < .001$.

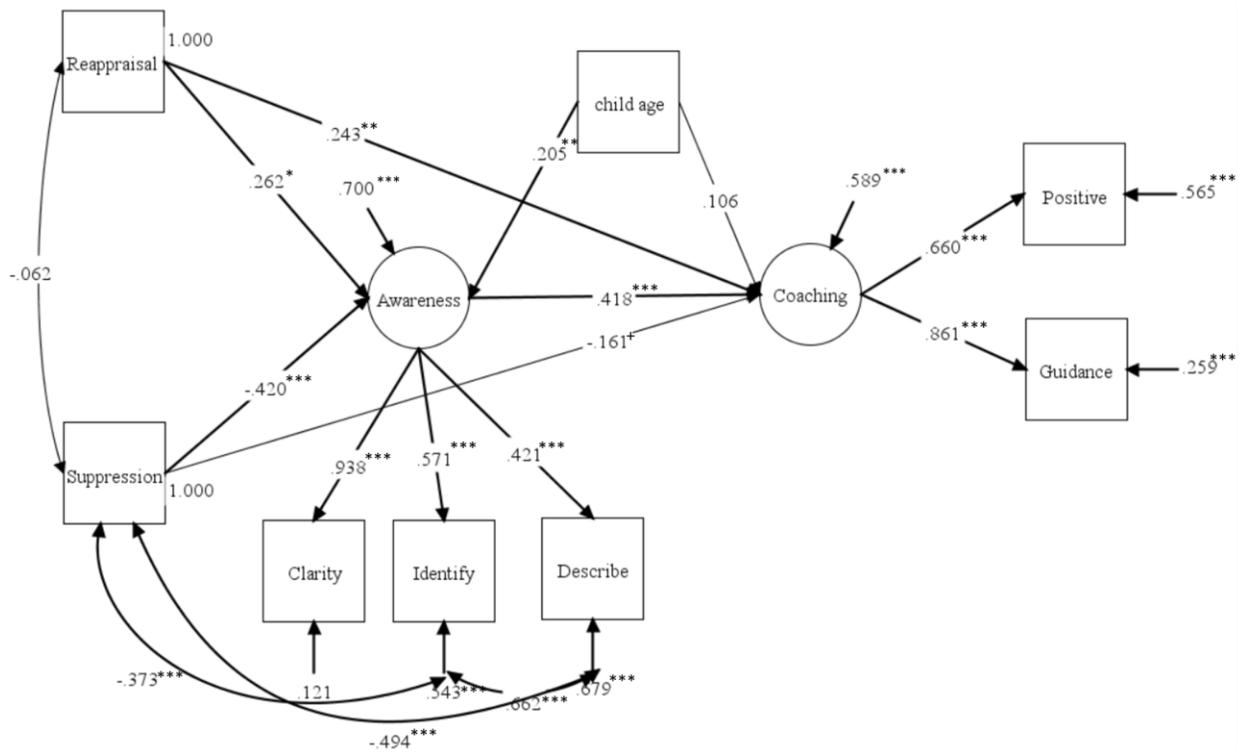


Figure 9. The full structural equation model of the final model in the American sample.

Standardized coefficients are presented. + $p < .01$, * $p < .05$, ** $p < .01$, *** $p < .001$.

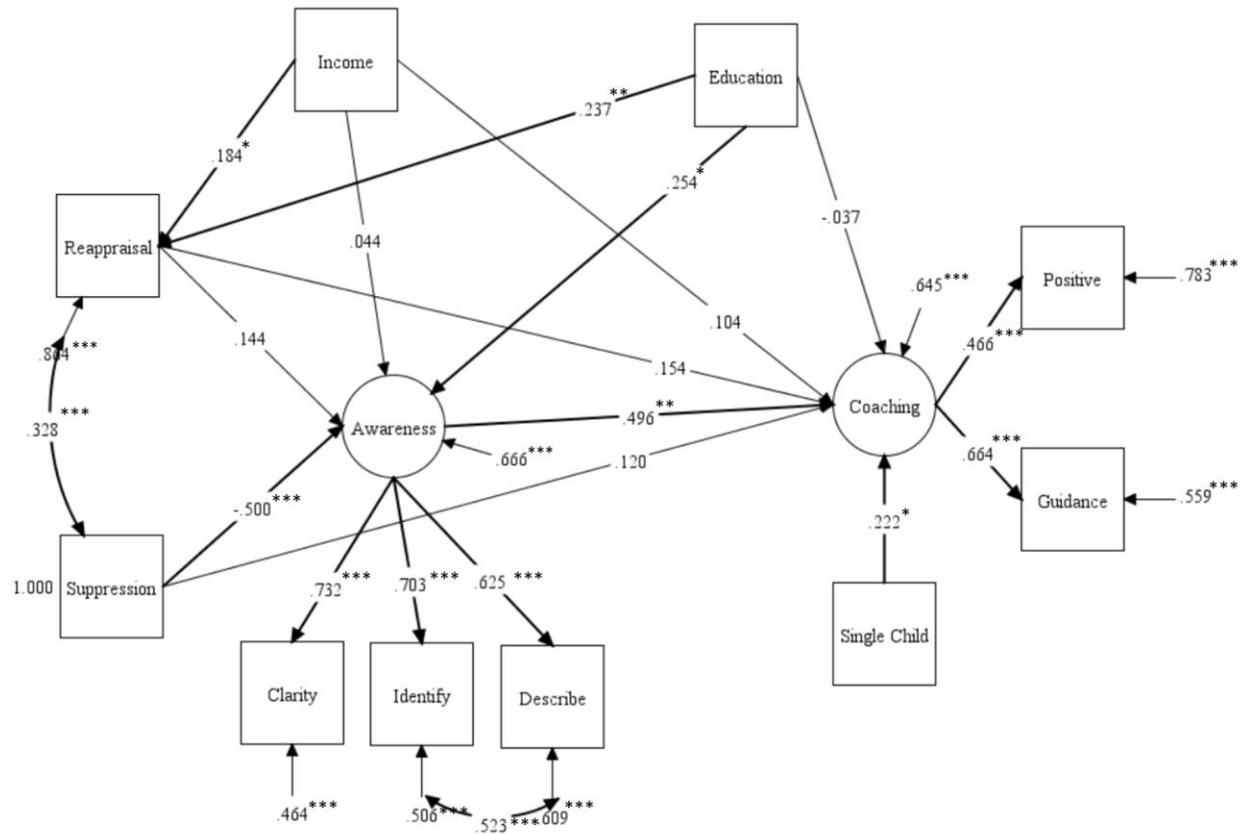


Figure 10. The full structural equation model of the final model in the Chinese sample.

Standardized coefficients are presented. * $p < .05$, ** $p < .01$, *** $p < .001$.

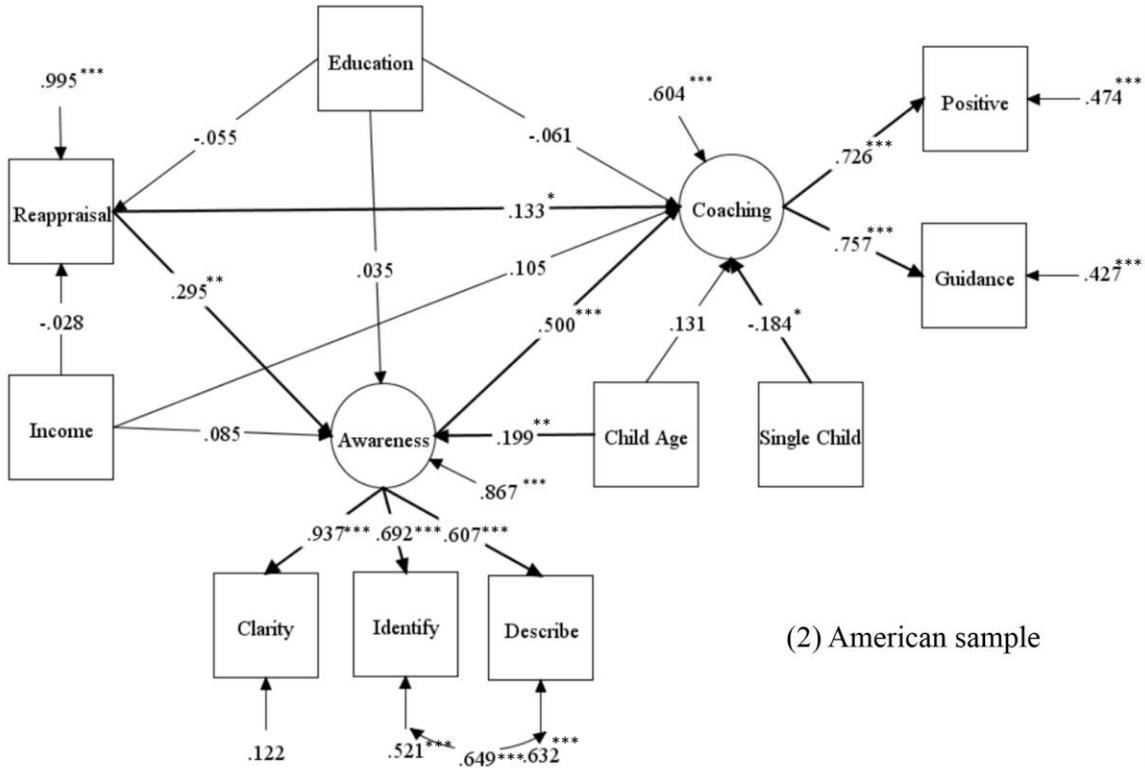
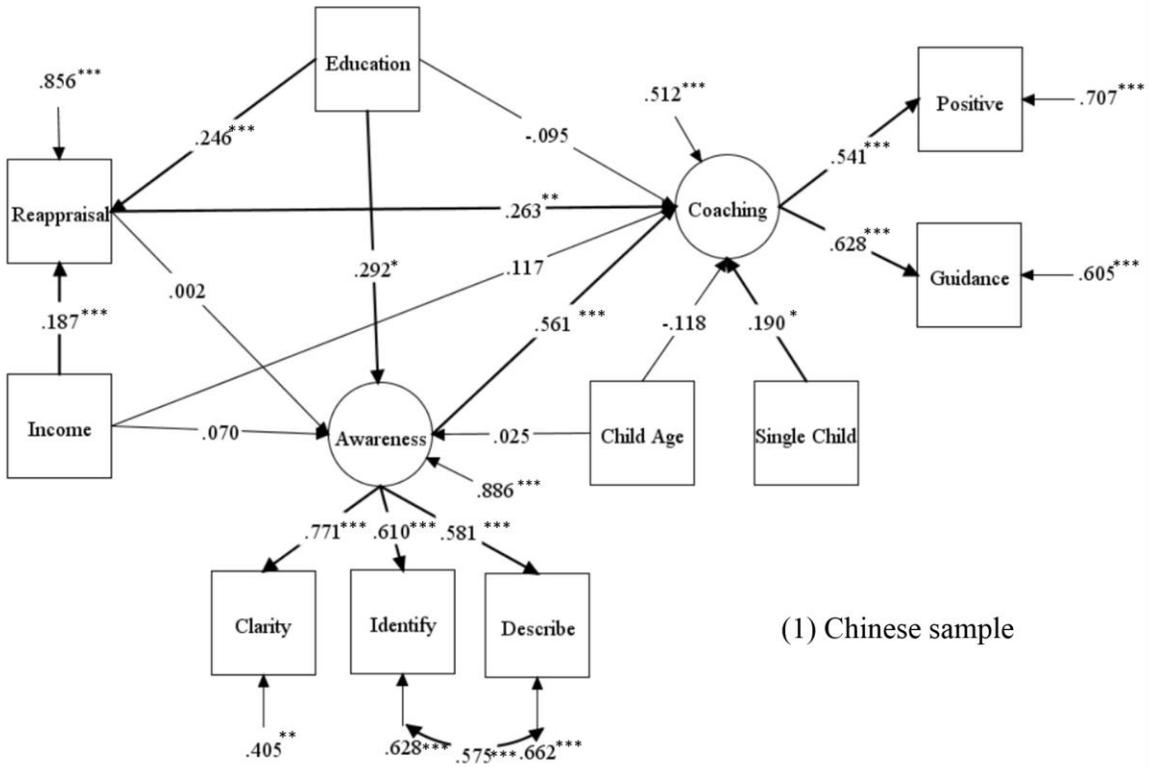


Figure 11. Multi-group Analyses across Two Samples. Standardized coefficients are presented. * $p < .05$, ** $p < .01$, *** $p < .001$.

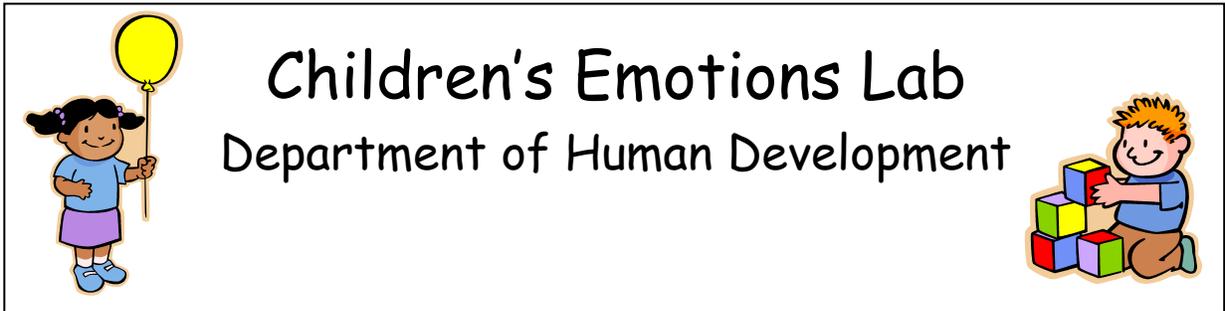
Appendix A

Mothers sought for emotion coaching study

Are you a mother with a child 6 to 8 years old? If so, we would love to learn about your emotion regulation and your belief about children's emotions for a study conducted by a doctoral student at Virginia Tech.

We are interested in your response to a set of questionnaires, and it will take you approximately 40 minutes to complete the questionnaires. You will be entered into a drawing to receive a \$20 Amazon gift card in compensation. The odds of winning is 1 in 10. If you are interested in participating, please click https://virginiatech.qualtrics.com/SE/?SID=SV_8xm3od7BYuyel2R.

The participation is confidential and voluntary. For more information, please contact Lin Tan at lintan@vt.edu.



Are you a mother with a child aged 6 to 8 years?

We would love to learn about your emotion regulation and your beliefs about children's emotions for a study conducted by a doctoral student at Virginia Tech for her dissertation.

We are interested in your response to a set of questionnaires, which take you approximately 40 minutes to complete.

To compensate for your participation, you will be entered into a drawing to receive a \$20 Amazon gift card. The odds of winning are 1 in 10.

Interested? Please go to <http://tinyurl.com/motherecs>

The participation is confidential and voluntary.

For more information, please contact Lin Tan at lintan@vt.edu.

Lin Tan, M.S. Doctoral Candidate in Human Development
Cindy Smith, Ph.D. Associate Professor of Human Development

Appendix C

Parents' Beliefs About Children's Emotions

Instructions: These statements express some beliefs about children's emotional development. Please read each statement and write in the number that shows how much you agree with the statement. Put your response in the column titled "Answer." Please pick a child age (somewhere between the ages of 4 and 10) that you are familiar with, and respond to these statements for children of that age.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
	1	2	3	4	5	6
1. Children use emotions to manipulate others.	<input type="radio"/>					
2. When children are sad, they need to find their own ways to move on.	<input type="radio"/>					
3. Children may not focus on their commitments if they feel too much happiness.	<input type="radio"/>					
4. It's usually best to let a child work through being sad on their own.	<input type="radio"/>					
5. When children feel something, it stays with them for a long time.	<input type="radio"/>					
6. It is useful for children to feel angry sometimes.	<input type="radio"/>					
7. When children are angry, it is best to just let them work it through on their own.	<input type="radio"/>					
8. Parents don't have to know about all their child's feelings.	<input type="radio"/>					
9. Children's emotions tend to be long-lasting.	<input type="radio"/>					
10. When children are angry, it's hard for them to hide their feelings.	<input type="radio"/>					
11. Children's anger can be a relief to them, like a storm that clears the air.	<input type="radio"/>					
12. Children can control what they show on their faces.	<input type="radio"/>					

- | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 13. It's usually best to let a child work through their negative feelings on their own. | <input type="radio"/> |
| 14. The experience of anger can be a useful motivation for action. | <input type="radio"/> |
| 15. Children tend to figure out their feelings even when parents are not available to guide them. | <input type="radio"/> |
| 16. Children can control how they express their feelings. | <input type="radio"/> |
| 17. Children's emotional styles tend to stay the same over time. | <input type="radio"/> |
| 18. Children often act sad or angry just to get their own way. | <input type="radio"/> |
| 19. It is good for children to let their anger out. | <input type="radio"/> |
| 20. Children often cry just to get attention. | <input type="radio"/> |
| 21. Parents should encourage their child to tell them everything they are feeling. | <input type="radio"/> |
| 22. Parents should not show contempt toward their children. | <input type="radio"/> |
| 23. When children are very happy, they can control what they show to others. | <input type="radio"/> |
| 24. When children become sad or upset, parents can let them manage their feelings on their own. | <input type="radio"/> |
| 25. Children can control their emotions. | <input type="radio"/> |
| 26. Expressing anger is a good way for a child to let his/her desires and opinions be known. | <input type="radio"/> |
| 27. It is important for children to tell their parents everything that they are feeling. | <input type="radio"/> |
| 28. When children are too happy, they can get out of control. | <input type="radio"/> |
| 29. Too much joy can make it hard for a child to understand others. | <input type="radio"/> |
| 30. When children are angry, they need to find their own ways to resolve the situation. | <input type="radio"/> |
| 31. When children are very angry, | <input type="radio"/> |

they can control what they show to others.

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|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 32. Children's emotions last for long periods of time. | <input type="radio"/> |
| 33. Children who feel emotions strongly are likely to face a lot of trouble in life. | <input type="radio"/> |
| 34. Making fun of children's behavior is never a good idea. | <input type="radio"/> |
| 35. Children sometimes act sad, just to get attention. | <input type="radio"/> |
| 36. Being angry can motivate children to change or fix something in their lives. | <input type="radio"/> |
| 37. It's good for the family when children share their positive emotions. | <input type="radio"/> |
| 38. It is important for children to be able to show when they are happy. | <input type="radio"/> |
| 39. It is important for children to express their happiness when they feel it. | <input type="radio"/> |
| 40. Joy is an important emotion to feel. | <input type="radio"/> |
| 41. It is important for children to be proud of a job well done. | <input type="radio"/> |
| 42. When children show anger, they are letting you know that something is important to them. | <input type="radio"/> |
| 43. It is a parent's job to teach their children how to handle their emotions. | <input type="radio"/> |
| 44. It's important for parents to teach children the best ways to express their feelings. | <input type="radio"/> |
| 45. It's a parent's job to teach children how to deal with distress and other upsetting feelings. | <input type="radio"/> |
| 46. Parents should spend time helping children develop their own positive feelings. | <input type="radio"/> |
| 47. An important role for parents is to help their children understand the children's feelings. | <input type="radio"/> |

Appendix D

Parents' Beliefs About Children's Emotions (Chinese Version)

家长对于儿童情绪的观念

以下这些语句表达了对儿童情感发展的一些观念。请仔细阅读这些语句并在正确反应您对这些语句同意程度的数字上画圈。请选择一个您熟悉的小孩年龄段（4至10岁之间）对以下语句做出相应的回答。

	非常不同意	部分不同意	有点不同意	有点同意	部分同意	非常同意
	1	2	3	4	5	6
1. 小孩会用情绪来左右别人。	<input type="radio"/>					
2. 当小孩难过的时候，他们需要找到自己的方式来让自己释怀。	<input type="radio"/>					
3. 如果小孩太幸福，他们有可能无法专注于自己的保证过要做的事。	<input type="radio"/>					
4. 通常情况下，最好是让小孩自己面对和解决伤心的情绪。	<input type="radio"/>					
5. 当小孩有某种情绪时，这种情绪会持续很长时间。	<input type="radio"/>					
6. 对小孩来说，时不时体会一下生气这种情绪是有用的。	<input type="radio"/>					
7. 小孩生气时，最好是让小孩自己去解决这种情绪。	<input type="radio"/>					
8. 家长不需要知道他们小孩的所有情绪。	<input type="radio"/>					
9. 小孩的情绪往往会持续很久。	<input type="radio"/>					
10. 小孩生气时，他们很难掩饰自己的情绪。	<input type="radio"/>					
11. 生气对小孩来说可以是一种解脱，就像暴雨能净化空气。	<input type="radio"/>					
12. 小孩可以控制他们脸上显示哪种情绪。	<input type="radio"/>					
13. 通常情况下，最好是让小孩自己解决他/她的负面情绪。	<input type="radio"/>					
14. 愤怒可以是促进行动的有用动力。	<input type="radio"/>					
15. 就算家长不在身边指导，小孩往往也能弄明白自己的感受。	<input type="radio"/>					
16. 小孩可以控制自己要如何表达自己的情绪。	<input type="radio"/>					

- | | | | | | | |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 17. 小孩的情感类型往往会长时间保持不变。 | <input type="radio"/> |
| 18. 小孩经常故作伤心或生气只是为了达到自己想要的结果。 | <input type="radio"/> |
| 19. 小孩把愤怒发泄出来对他们是有好处的。 | <input type="radio"/> |
| 20. 往往小孩哭泣只是为了得到关注。 | <input type="radio"/> |
| 21. 家长应该鼓励小孩向自己倾诉他/她所有的情感。 | <input type="radio"/> |
| 22. 家长不应该表现出对自己小孩的轻视。 | <input type="radio"/> |
| 23. 当小孩非常高兴时，他们可以控制自己的表现。 | <input type="radio"/> |
| 24. 当小孩变得伤心或难过时，家长可以让他们自己去管理自己的情绪。 | <input type="radio"/> |
| 25. 小孩可以控制自己的情绪。 | <input type="radio"/> |
| 26. 表达愤怒是一个孩子让他/她的愿望和意见被人知道的好方法。 | <input type="radio"/> |
| 27. 小孩向家长倾诉他们所有的情感是一件重要的事。 | <input type="radio"/> |
| 28. 当小孩高兴过头时，他们有可能会失控。 | <input type="radio"/> |
| 29. 太多的喜悦可能让小孩很难去体谅别人。 | <input type="radio"/> |
| 30. 当小孩生气时，他们需要自己找到解决问题的方法。 | <input type="radio"/> |
| 31. 当小孩非常生气时，他们可以控制自己的表现。 | <input type="radio"/> |
| 32. 小孩的情绪会持续很长一段时间。 | <input type="radio"/> |
| 33. 情绪激烈的小孩可能会在生活中面临很多麻烦。 | <input type="radio"/> |
| 34. 拿小孩的行为来开玩笑从来都不是一个好主意。 | <input type="radio"/> |
| 35. 小孩有时故作伤心只是为了得到关注。 | <input type="radio"/> |
| 36. 愤怒可以激励小孩改变或改正生活中的某些事情。 | <input type="radio"/> |
| 37. 小孩分享他们的正面情绪是对整个家庭是有好处的。 | <input type="radio"/> |
| 38. 能够在快乐的时候将快乐表现出来，对小孩来说是很重要的。 | <input type="radio"/> |
| 39. 能够在感到快乐时将快乐能表达出来，对小孩来说是很重要的。 | <input type="radio"/> |

- | | | | | | | |
|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 40. 喜悦是一种很重要的情绪。 | <input type="radio"/> |
| 41. 小孩能够为很好的完成了工作而感到自豪是很重要的。 | <input type="radio"/> |
| 42. 当小孩表现出生气时，他们是在让你知道有些事对他们来说很重要。 | <input type="radio"/> |
| 43. 教小孩如何处理他们自己的情绪是家长的工作。 | <input type="radio"/> |
| 44. 家长教给小孩怎样是最佳的情感表达方式是重要的。 | <input type="radio"/> |
| 45. 教小孩如何处理痛苦和其他负面情绪是家长的工作。 | <input type="radio"/> |
| 46. 家长应该花时间帮助小孩培养他们的正面情绪。 | <input type="radio"/> |
| 47. 家长的一个重要工作是帮助小孩理解小孩自己的感受。 | <input type="radio"/> |

Appendix E

Scoring of Parents' Beliefs about Children's Emotions

Value of positive emotions (N = 5)

- 37. It's good for the family when children share their positive emotions.
- 38. It is important for children to be able to show when they are happy.
- 39. It is important for children to express their happiness when they feel it.
- 40. Joy is an important emotion to feel.
- 41. It is important for children to be proud of a job well done.

Value of negative emotions (N = 7)

- 6. It is useful for children to feel angry sometimes.
- 11. Children's anger can be a relief to them, like a storm that clears the air.
- 14. The experience of anger can be a useful motivation for action.
- 19. It is good for children to let their anger out.
- 26. Expressing anger is a good way for a child to let his/her desires and opinions be known.
- 36. Being angry can motivate children to change or fix something in their lives.
- 42. When children show anger, they are letting you know that something is important to them.

Parental guidance (N = 5)

- 43. It is a parent's job to teach their children how to handle their emotions.
- 44. It's important for parents to teach children the best ways to express their feelings.
- 45. It's a parent's job to teach children how to deal with distress and other upsetting feelings.
- 46. Parents should spend time helping children develop their own positive feelings.
- 47. An important role for parents is to help their children understand the children's feelings.

Appendix F

Maternal Emotional Style Questionnaire

Please rate your agreement with each of the following statements on the following scale.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
1. When my child is sad, it's time to problem-solve.	<input type="radio"/>				
2. Anger is an emotion worth exploring.	<input type="radio"/>				
3. When my child is sad, I am expected to fix the world and make it perfect.	<input type="radio"/>				
4. When my child gets sad, it's time to get close.	<input type="radio"/>				
5. Sadness is something that one has to get over, to ride out, not to dwell on.	<input type="radio"/>				
6. I prefer a happy child to a child who is overly emotional.	<input type="radio"/>				
7. I help my child get over sadness quickly so he/she can move on to other things.	<input type="radio"/>				
8. When my child is angry, it's an opportunity for getting close.	<input type="radio"/>				
9. When my child is angry, I take some time to try to experience this feeling with my child.	<input type="radio"/>				
10. I try to change my child's angry moods into cheerful ones.	<input type="radio"/>				
11. Childhood is a happy-go-lucky time, not a time for feeling sad or angry.	<input type="radio"/>				
12. When my child gets angry my goal is to get him/her to stop.	<input type="radio"/>				
13. When my child is angry I want to know what he/she is thinking.	<input type="radio"/>				
14. When my child is angry, it's time to solve a problem.	<input type="radio"/>				

Appendix G

Maternal Emotional Style Questionnaire (Chinese Version)

母亲对儿童的情绪看法

以下是一些描述你和你孩子感受的句子。請根據你的感受，圈出你對每一項描述的同意程度。

	非常不同意	不同意	中立	同意	非常同意
	1	2	3	4	5
15. 当我的孩子感到悲伤时，就是该解决问题的时机了。	<input type="radio"/>				
16. 愤怒是一种值得探索的情绪。	<input type="radio"/>				
17. 当我的孩子感到悲伤时，我应该要解决问题并且让一切变得完美。	<input type="radio"/>				
18. 当我的孩子感到悲伤时，就是我亲近他/她的时机了。	<input type="radio"/>				
19. 悲伤是一种需要我们经受住然后放下的情绪，而不需要我们老是想着。	<input type="radio"/>				
20. 我更希望有一个开心的小孩而不是一个过于情绪化的小孩。	<input type="radio"/>				
21. 我帮助我的小孩尽快从悲伤中恢复，这样他/她就能继续别的事情。	<input type="radio"/>				
22. 当我的孩子感到愤怒时，这是一个我与他/她亲近的好机会。	<input type="radio"/>				
23. 当我的孩子感到愤怒时，我会花一些时间与他/她一起体验这种感受。	<input type="radio"/>				
24. 我会尝试将我孩子的愤怒转化为愉快的情绪。	<input type="radio"/>				
25. 童年是一段无忧无虑的时期，这不是一段该感到伤心或愤怒的时期。	<input type="radio"/>				
26. 当我的孩子感到愤怒时，我的目标是令他/她停止愤怒。	<input type="radio"/>				
27. 当我的孩子感到愤怒时，我想小姐他/他正在想什么。	<input type="radio"/>				
28. 当我的孩子感到愤怒时，这是解决一个问题的时机了。	<input type="radio"/>				

Appendix H

Scoring of Maternal Emotional Style Questionnaire

Emotion Coaching Subscale (N = 7)

1. When my child is sad, it's time to solve his/her problem.
2. Anger is an emotion worth exploring.
4. When my child gets sad, it's time to get close.
8. When my child is angry, it's an opportunity for getting close.
9. When my child is angry, I take some time to experience this feeling with him/her.
13. When my child is angry, I want to know what he/she is thinking.
14. When my child is angry, it's time to solve his/her problem.

Appendix I

Difficulties in Emotion Regulation Scale

Please indicate how often the following statements apply to you by circling the appropriate number from the scale.

	Almost never	Sometimes	About half the time	Most of the time	Almost always
	1	2	3	4	5
1. I am clear about my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I pay attention to how I feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I experience my emotions as overwhelming and out of control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I have no idea how I am feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I have difficulty making sense out of my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I am attentive to my feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I know exactly how I am feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I care about what I am feeling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I am confused about how I feel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. When I'm upset, I acknowledge my emotions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. When I'm upset, I become angry with myself for feeling that way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. When I'm upset, I become embarrassed for feeling that way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. When I'm upset, I have difficulty getting work done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. When I'm upset, I become out of control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. When I'm upset, I believe that I will remain that way for a long time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. When I'm upset, I believe that I will end up feeling very depressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. When I'm upset, I believe that my feelings are valid and important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. When I'm upset, I have difficulty focusing on other things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. When I'm upset, I feel out of control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 20. When I'm upset, I can still get things done. | <input type="radio"/> |
| 21. When I'm upset, I feel ashamed at myself for feeling that way. | <input type="radio"/> |
| 22. When I'm upset, I know that I can find a way to eventually feel better. | <input type="radio"/> |
| 23. When I'm upset, I feel like I am weak. | <input type="radio"/> |
| 24. When I'm upset, I feel like I can remain in control of my behaviors. | <input type="radio"/> |
| 25. When I'm upset, I feel guilty for feeling that way. | <input type="radio"/> |
| 26. When I'm upset, I have difficulty concentrating. | <input type="radio"/> |
| 27. When I'm upset, I have difficulty controlling my behaviors. | <input type="radio"/> |
| 28. When I'm upset, I believe there is nothing I can do to make myself feel better. | <input type="radio"/> |
| 29. When I'm upset, I become irritated at myself for feeling that way. | <input type="radio"/> |
| 30. When I'm upset, I start to feel very bad about myself. | <input type="radio"/> |
| 31. When I'm upset, I believe that wallowing in it is all I can do. | <input type="radio"/> |
| 32. When I'm upset, I lose control over my behavior. | <input type="radio"/> |
| 33. When I'm upset, I have difficulty thinking about anything else. | <input type="radio"/> |
| 34. When I'm upset I take time to figure out what I'm really feeling. | <input type="radio"/> |
| 35. When I'm upset, it takes me a long time to feel better. | <input type="radio"/> |
| 36. When I'm upset, my emotions feel overwhelming. | <input type="radio"/> |

Appendix J

Difficulties in Emotion Regulation Scale (Chinese Version)

情绪控制量表

对下面的每一表述，请用画圈的方式在每一个表述对应的评分上选出最符合你的选项。

	几乎从不 (0-10%) 1	有时 (11-35%) 2	大约一半的时候 (36%-65%) 3	大多数时候 (66-90%) 4	几乎总是 (91-100%) 5
1. 我很清楚自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. 我注重自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 我的情绪极其强烈且不可控制。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 我不知道自己的感受是什么。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. 我很难理解自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. 我留意自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. 我确切的知道自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. 我在乎自己的感受。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. 我对自己的感受感到困惑。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. 当我心情不好时，我承认自己有这种情绪。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. 当我心情不好时，我为自己有这种感受而生自己的气。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. 当我心情不好时，我为自己有这种感受而感到尴尬。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. 当我心情不好时，我很难完成任务。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. 当我心情不好时，我变得失控。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. 当我心情不好时，我相信我会持续这种状态很长一段时间。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. 当我心情不好时，我相信我会变得非常消沉。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. 当我心情不好时，我相信自己的情绪是合理且重要的。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. 当我心情不好时，我难以专注于其他事情。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- | | | | | | |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 19. 当我心情不好时，我感到失控。 | <input type="radio"/> |
| 20. 当我心情不好时，我仍然可以把事情完成。 | <input type="radio"/> |
| 21. 当我心情不好时，我为自己有这种感受感到羞愧。 | <input type="radio"/> |
| 22. 当我心情不好时，我知道我有办法让我最终感觉好受。 | <input type="radio"/> |
| 23. 当我心情不好时，我觉得我很软弱。 | <input type="radio"/> |
| 24. 当我心情不好时，我觉得我仍然可以控制自己的行为。 | <input type="radio"/> |
| 25. 当我心情不好时，我为自己有这种情绪而内疚。 | <input type="radio"/> |
| 26. 当我心情不好时，我难以专注。 | <input type="radio"/> |
| 27. 当我心情不好时，我的行为难以自控。 | <input type="radio"/> |
| 28. 当我心情不好时，我相信我没有任何办法让自己感觉好受些。 | <input type="radio"/> |
| 29. 当我心情不好时，我为自己有这种情绪变得恼怒。 | <input type="radio"/> |
| 30. 当我心情不好时，我开始对自己感到很不满。 | <input type="radio"/> |
| 31. 当我心情不好时，我相信我所能做的一切就是沉溺其中。 | <input type="radio"/> |
| 32. 当我心情不好时，我行为失控。 | <input type="radio"/> |
| 33. 当我心情不好时，我难以考虑其他任何事情。 | <input type="radio"/> |
| 34. 当我心情不好时，我会花时间去弄明白我的真实感受。 | <input type="radio"/> |
| 35. 当我心情不好时，我要花很长时间来让自己感觉好受些。 | <input type="radio"/> |
| 36. 当我心情不好时，我的情绪过于强烈叫我不知所措。 | <input type="radio"/> |

Appendix K

Scoring of Difficulties in Emotion Regulation Scale

Lack of emotional clarity (N = 5)

1R) I am clear about my feelings.

4) I have no idea how I am feeling.

5) I have difficulty making sense out of my feelings.

7R) I know exactly how I am feeling.

9) I am confused about how I feel.

Appendix L

Toronto Alexithymia Scale 20

Please read each statement and write in the number that shows how much you agree with the statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
	1	2	3	4	5
1. I am often confused about what emotion I am feeling.	<input type="radio"/>				
2. It is difficult for me to find the right words for my feelings.	<input type="radio"/>				
3. I have physical sensations that even doctors don't understand.	<input type="radio"/>				
4. I am able to describe my feelings easily.	<input type="radio"/>				
5. I prefer to analyze problems rather than just describe them.	<input type="radio"/>				
6. When I am upset, I don't know if I am sad, frightened, or angry.	<input type="radio"/>				
7. I am often puzzled by sensations in my body.	<input type="radio"/>				
8. I prefer to just let things happen rather than to understand why they turned out that way.	<input type="radio"/>				
9. I have feelings that I can't quite identify.	<input type="radio"/>				
10. Being in touch with emotions is essential.	<input type="radio"/>				
11. I find it hard to describe how I feel about people.	<input type="radio"/>				
12. People tell me to describe my feelings more.	<input type="radio"/>				
13. I don't know what's going on inside me.	<input type="radio"/>				
14. I often don't know why I am angry.	<input type="radio"/>				
15. I prefer talking to people about their daily activities rather than their feelings.	<input type="radio"/>				
16. I prefer to watch "light" entertainment shows rather than psychological dramas.	<input type="radio"/>				

- | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 17. It is difficult for me to reveal my innermost feelings, even to close friends. | <input type="radio"/> |
| 18. I can feel close to someone, even in moments of silence. | <input type="radio"/> |
| 19. I find examination of my feelings useful in solving personal problems. | <input type="radio"/> |
| 20. Looking for hidden meanings in movies or plays distracts from their enjoyment. | <input type="radio"/> |

Appendix M

Toronto Alexithymia Scale 20 (Chinese Version)

多伦多述情障碍量表

请认真阅读下面的陈述，根据你同意或不同意的程度，在最适合你情况的数目上划圈。

	完全不同意	不同意	中立	同意	完全同意
	1	2	3	4	5
1. 我常常搞不清自己有什么样的内心感受	<input type="radio"/>				
2. 我感到难以用恰当的词语来描述我的内心感受	<input type="radio"/>				
3. 我身体的一些感觉连医生也不能理解	<input type="radio"/>				
4. 我能容易描述自己的内心感受	<input type="radio"/>				
5. 我更喜欢分析问题而不只是对问题进行描述。	<input type="radio"/>				
6. 当我心里难受时，我不知道究竟是悲伤，害怕，还是愤怒	<input type="radio"/>				
7. 我常常对我身体的一些感觉感到莫名其妙	<input type="radio"/>				
8. 我更喜欢任由事情发展，而不是去深究为什么事情要那样发展	<input type="radio"/>				
9. 我有一些自己难以识别的内心感受	<input type="radio"/>				
10. 知道自己的情绪体验对我来说很重要	<input type="radio"/>				
11. 我难以描述我对别人有何感受	<input type="radio"/>				
12. 别人让我更多的描述和表达我的内心感受	<input type="radio"/>				
13. 我不知道自己的内心活动	<input type="radio"/>				
14. 我常常不知道我为何愤怒	<input type="radio"/>				
15. 我更愿意与别人谈论他们的日常活动而不是他们的内心感受	<input type="radio"/>				
16. 我宁可看轻松的娱乐片而不愿看描写内心冲突的情节剧	<input type="radio"/>				
17. 即使是对密友，我也难以表达我内心深处	<input type="radio"/>				

的感受

18. 即使在沉默无言之时，我也能感到与某人很亲近
19. 我觉得审视自己内心的感受对于解决私人问题是有用的
20. 寻找电影或戏剧中隐藏的含义会使人从娱乐中分心

Appendix N

Scoring of Toronto Alexithymia Scale 20

Difficulty Identifying Feelings (N = 7)

1. I am often confused about what emotion I am feeling.
3. I have physical sensations that even doctors don't understand.
6. When I am upset, I don't know if I am sad, frightened, or angry.
7. I am often puzzled by sensations in my body.
9. I have feelings that I can't quite identify.
13. I don't know what's going on inside me.
14. I often don't know why I am angry.

Difficulty Describing Feelings (N = 5)

2. It is difficult for me to find the right words for my feelings.
- 4 (R). I am able to describe my feelings easily.
11. I find it hard to describe how I feel about people.
12. People tell me to describe my feelings more.
17. It is difficult for me to reveal my innermost feelings, even to close friends.

Appendix O

Emotion Regulation Questionnaire

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways.

	Strongly disagree			Neutral			Strongly agree
	1	2	3	4	5	6	7
1. When I want to feel more <i>positive</i> emotion (such as joy or amusement), I <i>change what I'm thinking about</i> .	<input type="radio"/>						
2. I keep my emotions to myself.	<input type="radio"/>						
3. When I want to feel less <i>negative</i> emotion (such as sadness or anger), I <i>change what I'm thinking about</i> .	<input type="radio"/>						
4. When I am feeling <i>positive</i> emotions, I am careful not to express them.	<input type="radio"/>						
5. When I'm faced with a stressful situation, I make myself <i>think about it</i> in a way that helps me stay calm.	<input type="radio"/>						
6. I control my emotions by <i>not expressing them</i> .	<input type="radio"/>						
7. When I want to feel more <i>positive</i> emotion, I <i>change the way I'm thinking</i> about the situation.	<input type="radio"/>						
8. I control my emotions by <i>changing the way I think</i> about the situation I'm in.	<input type="radio"/>						
9. When I am feeling <i>negative</i> emotions, I make sure not to express them.	<input type="radio"/>						
10. When I want to feel less <i>negative</i> emotion, I <i>change the way I'm thinking</i> about the situation.	<input type="radio"/>						

Appendix P

Emotion Regulation Questionnaire (Chinese Version)

情绪控制量表

我们希望对您生活中情绪方面，特别是情绪控制 (包含情绪调节和情绪管理)方面 进行一项调查。我们感兴趣的是您的情绪生活的两部分内容。一部分是您的情绪体验，或者说是您内心的感受是什么。另一部分是您的情绪表达，或者说是您如何用言语、姿势或者行为等方式来表达情绪。下面一些题目看起来可能有些类似，但是它们之间有着非常重要的区别。对下面的每一项表述，请在对应的等级上表明您赞同或者不赞同的水平。

	完全不同意		中立			完全同意	
	1	2	3	4	5	6	7
1. 当我想多感受一些积极情绪时 (例如喜悦或有趣)，我会改变我思考的内容。	<input type="radio"/>						
2. 我不会向别人表露自己的情绪。	<input type="radio"/>						
3. 当我想少感受一些消极情绪时 (例如悲伤或愤怒)，我会改变我思考的内容。	<input type="radio"/>						
4. 当我感受到积极情绪的时候，我会小心不让它们表露出来。	<input type="radio"/>						
5. 当面对有压力的情况时，我会让自己以一种能让自己保持冷静的方式去思考它。	<input type="radio"/>						
6. 我控制情绪的方法是不把它们表达出来。	<input type="radio"/>						
7. 当我想多感受一些积极情绪时，我会改变我对当下处境的想法。	<input type="radio"/>						
8. 我控制情绪的方法是改变我对自己当下处境的想法。	<input type="radio"/>						
9. 当我感受到消极情绪时，我会确保自己不把它们表现出来。	<input type="radio"/>						
10. 当我想少感受一些消极情绪时，我会改变我对当下处境的想法。	<input type="radio"/>						

Appendix Q

Scoring of Emotion Regulation Questionnaire

Reappraisal (N = 6)

1. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
3. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
5. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
7. When I want to feel more positive emotion, I change the way I'm thinking about the situation.
8. I control my emotions by changing the way I think about the situation I'm in.
10. When I want to feel less negative emotion, I change the way I'm thinking about the situation.

Suppression (N = 4)

2. I keep my emotions to myself.
4. When I am feeling positive emotions, I am careful not to express them.
6. I control my emotions by not expressing them.
9. When I am feeling negative emotions, I make sure not to express them.