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Maternal Reactions to Children's Negative Emotions: Relations to Children's Socio-Emotional
Development among European American and Chinese Immigrant Children

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Abstract

This study examined the relations among maternal reactions to children's negative emotions and children's socio-emotional outcomes, including psychological adjustment, emotion knowledge, and coping strategies. European American and Chinese immigrant mothers reported their reactions to children's ($N = 117$, $M = 7.14$ years) negative emotions and children's psychological adjustment. One year later, children were interviewed for emotion knowledge and mothers reported on children's use of coping strategies. Mothers from the two cultural groups reported the same level of supportive reactions to their children's negative emotions, whereas Chinese immigrant mothers more often adopted what are commonly considered non-supportive strategies than did European American mothers. Whereas supportive maternal reactions were associated with better child outcomes in both cultures, maternal non-supportive reactions were negatively associated with children's functioning for European American children but not for Chinese immigrant children. The findings shed critical light on the functional meaning of parenting practices in specific cultural contexts in shaping developmental outcomes.

Key words: Emotion socialization, culture, emotion knowledge, coping, psychological adjustment

Maternal Reactions to Children's Negative Emotions: The Relations to Children's Socio-emotional Development among European American and Chinese Immigrant Children

Parents play an important role in children's emotional lives. In response to children's expressions of emotions, especially negative emotions, parents often adopt various strategies to exert their beliefs and convey their values about emotions. How parents react to children's negative emotions can subsequently influence how children themselves understand and cope with emotions (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002). These parental responses provide children with important information about the appropriate expression and regulation of emotions in specific situations (Fabes et al., 2002).

Prior studies have shown that warm and supportive parental reactions facilitate children's emotion expression, emotion regulation, and social competence, whereas harsh and non-supportive reactions are harmful to children's socio-emotional development (Eisenberg, Fabes, & Murphy, 1996; Eisenberg et al., 1999; Fabes et al., 2002; Gottman, Katz, & Hooven, 1997). However, most of the past research regarding parental reactions to children's negative emotions has focused on Western, particularly European American, populations. This is problematic given research that suggests emotion socialization differs across cultures (Friedlmeier, Corapci, & Cole, 2011). Cultures differ in the extent to which they value the experience, expression, and regulation of emotions (Markus & Kitayama, 1991; Matsumoto, Yoo, & Nakagawa, 2008). Thus, cultures may define the meaning and hence consequences of supportive and non-supportive parental emotion socialization strategies (Wang, 2016). It is therefore important to understand the diversity of parental reactions to their children's emotions and how those reactions relate to children's socio-emotional outcomes. In the present study, we focus on the relations of maternal

reactions to children's negative emotions to children's psychological adjustment, emotion knowledge, and coping strategies, among school-aged children from European American and first-generation Chinese immigrant families in the US.

Parental Reactions to Children's Negative Emotions

Parents react to children's negative emotions in a variety of ways. Fabes and his colleagues (2002) categorize the parental reactions into two major types. One type of reactions is *supportive*, including *problem-focused* reactions, *emotion-focused* reactions, and *emotion expressive encouragement*. *Problem-focused* reactions are parental strategies to help the child solve the problem that elicits the child's negative emotion. Parents who adopt *emotion-focused reactions* comfort the child to make him or her feel better. The strategies of *emotion expressive encouragement* reflect the degree to which parents accept or encourage the child's display of negative emotions (Fabes et al., 2002). Another major category of parental reactions is *non-supportive*, including *minimization* and *punitive* reactions. With *minimization* reactions, parents try to restrict children's expression of distress by downplaying the problem or the child's emotions. *Punitive* reactions reflect the degree to which parents control children's display of negative emotions with physical or verbal punishment (Eisenberg & Fabes, 1994; Fabes et al., 2002).

Maternal supportive and non-supportive reactions are expected to be associated with different child outcomes. Supportive reactions are thought to promote positive parent-child relationships and foster emotional security (Cassidy, 1994). They set the foundation for children to develop the ability to explore emotionally laden situations and regulate their emotions through parental modeling and coaching (Gottman et al., 1997). Moreover, Fabes and his colleagues suggest that, when parents use supportive reactions, children are not over aroused in stressful

situations and thus able to process parents' coaching for the management of their emotions and behaviors. As a result, children learn appropriate strategies for regulating their emotions and behaviors (Fabes, Eisenberg, & Eisenbud, 1993). In contrast, parents use non-supportive reactions to control or change their children's emotion rather than to seize the opportunity to teach children emotional regulation skills (Gottman et al., 1997). Consequently, children only learn to suppress their emotional expressions (Buck, 1984; Gross & Levenson, 1993). The emotions that have resulted in punishment and suppression often remain unresolved and increase in intensity over time, which may become evoked in the next stressful situation and contribute to children's difficulty in regulation (Buck, 1984; Gross & Levenson, 1993). Emotional dysregulation may in turn lead to maladaptive coping strategies or behavioral problems.

The Impact of Parental Reactions to Children's Negative Emotions

Research has demonstrated that parental supportive reactions promote children's adjustment, such as social competence (Eisenberg et al., 1996) and attentional control (Eisenberg & Fabes, 1994). In contrast, non-supportive reactions are associated with childhood maladaptive outcomes, such as behavioral problems (Gottman et al., 1997). They further undermine children's social and emotional competence by prolonging children's negative emotions, thus increasing the likelihood of dysregulated behaviors (Eisenberg et al., 1996). For example, children's externalizing behaviors are inversely associated with parental supportive reactions but positively associated with non-supportive reactions (Eisenberg et al., 1999).

Parental supportive reactions to children's emotional expressions also scaffold children's abilities to identify and explain their own and others' feelings (Denham & Kochanoff, 2002; Fabes et al., 2002). Parents who report more supportive reactions to their children's negative emotions have children who use more adaptive coping strategies (Gottman et al., 1997; Valiente,

Fabes, Eisenberg, & Spinrad, 2004). In contrast, children whose mothers more often use non-supportive strategies have fewer opportunities to learn about emotions and thus tend to have lower levels of emotion knowledge (Denham et al., 1997; Garner, Jones, & Miner, 1994), and are more likely to adopt maladaptive styles of coping (Eisenberg & Fabes, 1994; Eisenberg et al., 1996).

In sum, maternal supportive reactions to children's negative emotions are associated with children's greater emotion understanding, more functional coping, and better psychological adjustment. However, non-supportive reactions are related to children's emotional difficulty and mental and behavioral problems. Notably, parental non-supportive reactions are viewed as problematic in prior research primarily based on Western samples. Such reactions may, however, entail different meanings in other cultural contexts and therefore have differential relations with developmental outcomes.

The Role of Culture

Culture influences views about how emotion should be experienced, expressed, and regulated (Markus & Kitayama, 1991). In European American culture, in line with the cultural emphasis on independence and autonomy, emotion is viewed as reflective of the true self and personal authenticity. Expression of emotions is generally considered to be an assertion of the self and therefore should be cultivated and encouraged (Wang, 2006). In contrast, in East Asian cultures such as China that prize group harmony and relatedness, a great emphasis is placed on moderation in all matters of the heart. Explicit expression or communication of emotions is viewed as potentially disruptive to social harmony and therefore needs to be strictly controlled (Markus & Kitayama, 1991; Wang, 2006, 2013).

These different cultural norms regarding emotion are reflected in family socialization practices (Friedlmeier et al., 2011; Liu, Yang, Fang, Snidman, & Tronick, 2013). European American parents, who value the importance of emotional expressions, readily accept children's negative emotions and encourage children to express and experience such emotions (Gottman et al., 1997; Wang, 2001; Wang & Fivush, 2005). Parenting practices that are used to control children's emotions, such as minimization, punishment, or criticisms of negative emotions, are viewed as unfair, illegitimate, and harmful for emotional development in this cultural context (Gottman et al., 1997). However, these so-called non-supportive strategies may be viewed differently in cultures such as China, where parents often perceive controlling parenting practices, including punishment, as a sign of parental involvement and concern, instead of being harsh or non-supportive (Chao, 1994). Although European American mothers' use of controlling practices is negatively related to their supportive behaviors, these relations do not hold and sometimes are even positive for Chinese mothers (Wu et al., 2002). Research has shown that whereas Asian parents often adopt the same level of supportive reactions as European American parents do, they use more punishment or neglect strategies to control children's negative emotion expression in order to promote interpersonal harmony (Friedlmeier et al., 2011; McCord & Raval, 2016; Saw & Okazaki, 2010).

Thus, although supportive reactions are similarly valued by parents across cultures and may therefore equally relate to positive child outcomes, non-supportive reactions may differentially influence children given the different cultural meanings they entail. Parents from European American culture strive to promote children's autonomy and expression of the self. Non-supportive reactions misalign such socialization goals and therefore impede children's socio-emotional functioning (Eisenberg et al., 1996; Fabes et al., 2002). In contrast, parents from

East Asian cultures, such as Chinese culture, expect children to dampen and control their negative emotions to facilitate social harmony. As a result, non-supportive reactions may be normative and conducive in this cultural context. Indeed, Chinese children tend to perceive controlling parenting practices as more acceptable than do North American children (Helwig, To, Wang, Liu, & Yang, 2014). Compared with North American children, Chinese children may be more likely to understand the parent's good intention underlying the non-supportive behaviors, feel less aversive to such behaviors, and are less likely to defy parents when non-supportive parenting strategies are used. In a cultural context in which non-supportive reactions are common and acceptable, such parenting behaviors may not have a negative impact on child outcomes.

Notably, in a study with Chinese families living in China, parental non-supportive reactions were found to have a negative impact on children's psychological adjustment similar as in European American families (Tao, Zhou, & Wang, 2010). However, Tao and her colleagues conducted the study in Beijing, one of the largest and most modernized cities in China. Given the vast modernization and Western influences as well as the one-child policy, Chinese parents in large cities like Beijing tend to hold less traditional values and often socialize their children in ways similar to those of Western parents (Wang, 2008, 2013; Wang, Leichtman, & White, 1998). Parental non-supportive reactions may no longer be acceptable in this context and thus negatively affect child outcomes. It is critical to study other Chinese populations where traditional values and practices are upheld to fully understand the impact of parental practices. For instance, Chinese immigrant parents in the US strive to maintain traditional Chinese values that are familiar to them before immigration (Wang, 2013). They often socialize their children in ways to encourage conformity and emotional control (Kim, 2009; Wang, 2008, 2013). It remains

an empirical question about whether parental non-supportive reactions are still commonly used in Chinese immigrant families and how they are related to child outcomes.

The Present Study

The present study examined the concurrent and long-term relations of maternal reactions to children's negative emotions to children's psychological adjustment, emotion knowledge, and coping strategies, among school-aged children from European American and first generation Chinese immigrant families in the US. Mothers reported their reactions to children's negative emotions as well as children's psychological adjustment when children were on average seven years of age. A year later, children's emotion knowledge was assessed, and mothers reported on children's use of coping strategies. Given the cultural differences in parental socialization goals and practices (Chao, 1994), we expected both cultural similarities and differences in maternal reactions to children's negative emotions (Hypothesis 1). Specifically, we expected that Chinese immigrant mothers would endorse more non-supportive reactions than European American mothers (Hypothesis 1a), but that mothers of the two cultural groups would exhibit similar supportive reactions (Hypothesis 1b).

Furthermore, we had different predictions of maternal supportive and non-supportive reactions in relation to children's socio-emotional development. On the one hand, supportive reactions are considered constructive in both European American and Chinese cultures. Thus these reactions were predicted to facilitate children's socio-emotional development in both cultural contexts. Specifically, regardless of culture, children whose mothers used more supportive reactions would exhibit a greater level of emotion knowledge, more adaptive coping styles, greater social skills, and fewer behavioral problems (Hypothesis 2). On the other hand, non-supportive reactions have different meanings in European American and Chinese cultures

(Chao, 1994; Gottman et al., 1997), and therefore, we expected that culture would serve as a moderator for the link between parental non-supportive reactions and child outcomes (Hypothesis 3). Specifically, European American children whose mothers used more non-supportive reactions would have lower levels of adaptive skills and emotion knowledge, but more behavioral problems. They were also expected to use less adaptive coping strategies and more maladaptive coping strategies (Hypothesis 3a). However, for Chinese immigrant children, these negative effects of maternal non-supportive reactions would be alleviated or nonexistent (Hypothesis 3b).

Method

Participants

Data were collected at two time points and came from a larger longitudinal study of socio-cognitive development during middle childhood. At Time 1, 59 European American (EA) children (22 boys; *age range* = 6.28 – 8.01 years, *M* = 7.18 years) and 58 Chinese immigrant (CI) children (30 boys; *age range* = 6.13 – 8.18 years, *M* = 7.11 years) and their mothers participated. Children were recruited by word-of-mouth and through local schools in upstate New York. Parents were both European Americans (for EA children) or first-generation Chinese immigrants (for CI children). All children were from middle-class families, and the majority of mothers (EA: 97%, CI: 98%) had a college education or beyond. CI mothers had on average lived in the U.S. for 12.5 years (*SD* = 4.50). Mothers provided consent for their children to participate in this study, and children provided assent. One year later, at time two, 54 EA children (19 boys; *age range* = 7.33 – 9.03 years, *M* = 8.23) and 49 CI children (26 boys; *age range* = 7.11 – 9.23 years, *M* = 8.12) remained in the sample. Fourteen children failed to participate at Time 2 primarily due to a family move. There was no significant difference in any measure between children who completed both visits and those who did not.

Procedure

Two trained female research assistants visited children at their home at each time point. One primary researcher interviewed children and the other researcher videotaped the entire procedure. At the first visit, mothers completed questionnaires about their reactions to children's negative emotions and their children's psychological adjustment. At the second visit, children's emotion knowledge was assessed, and their coping strategies were reported by mothers. All questionnaires were written in both Chinese and English, and a translation and back-translation procedure was applied to ensure a balanced equality of both literal and sense meaning. Chinese immigrant children were visited by English-Chinese bilingual researchers and completed the emotion knowledge task in the language of the child's choice. All except one CI child chose to speak English in the emotion knowledge task. Each home visit took approximately 2 hours. Only tasks relevant to the current study are described here.

Measures

Maternal reactions to children's negative emotions. During the first visit, mothers completed a questionnaire, Coping with Children's Negative Emotions Scale (CCNES, Fabes, Eisenberg, & Bernzweig, 1990), to report their reactions to children's negative emotions in 12 hypothetical situations in which children typically experience distress (e.g., when child is afraid of scary movies). For each situation, mothers rated the likelihood that they would respond in each of six different ways on 7-point scales ranging from 1 (*very unlikely*) to 7 (*very likely*). The six types of reactions were maternal distress reactions (e.g., "get angry at my child"), problem-focused reactions (e.g., "help my child figure out how to get the bike fixed"), emotion-focused reactions (e.g., "comfort my child and try to get him/her to forget about the accident"), expressive encouragement (e.g., "encourage my child to talk about his/her fear"), punitive

reactions (e.g., “send my child to his/her room to cool off”), and minimization reactions (e.g., “tell my child that he/she is over-reacting”). Following previous studies, the subscale of maternal distress reactions was excluded in the analysis because factor analyses have shown that it is separate from the supportive or non-supportive strategies of our interest (Fabes et al., 2002). A composite score of supportive reactions was calculated by averaging the scores of problem-focused reactions, emotion-focused reactions, and expression encouragement, and a composite score of non-supportive reactions was created by averaging the scores of punitive reactions and minimization reactions. This scale has been used widely across various cultures and shown good validity and reliability (e.g., Altan-Aytun, Yagmurlu, & Melis Yavuz, 2013; Brown, Craig, & Halberstadt, 2015; Trommsdorff, Cole, & Heikamp, 2012). Cronbach’s alphas were .87 and .86 for supportive and non-supportive composite scores, respectively, in the current sample.

Psychological adjustment. At Time 1, mothers completed the Behavior Assessment System for Children, Second Edition – Parent Rating Scales – Child (BASC-2 PRS-C), which concerns the relative frequency of a variety of adaptive and maladaptive behaviors in children (Reynolds & Kamphaus, 2004). The measurement includes 160 items and yields four composite scores, including externalizing problems composite, internalizing problems composite, behavioral symptoms index (BSI), and adaptive skills composite. Externalizing problems composite measures children’s disruptive behaviors, including subscales of hyperactivity, aggression, and conduct problems. Internalizing problems composite includes anxiety, depression, and somatization. The behavioral symptoms index consists of hyperactivity, aggression, depression, atypicality, withdrawal, and attention problems, and reflects the overall level of problematic behaviors. Adaptive skills composite assesses children’s core characteristics of adaptive behaviors when interacting with the social environment, including adaptability,

social skills, leadership, activities of daily living, and functional communication. All subscales and composite scores were transferred to *T* scores based on the age-appropriate General Combined norm set presented in the Manual (Reynolds & Kamphaus, 2004). The Cronbach's alphas for the four composite scores in the current sample were .89, .86, .91, and .91, respectively.

Emotion knowledge. At Time 2, children's emotion knowledge was assessed with an emotion-situation knowledge (EK) production task (Harris et al., 1987; Wang, Hutt, Kulkofsky, McDermott, & Wei, 2006). Children were asked to describe situations that would provoke particular emotions in people (e.g., "What makes people feel sad?"). The interviewer prompted children to respond with as many situations as possible by asking, "What else makes people feel sad?" until children indicated by speech or gesture that their responses were exhausted. A total of seven emotions were asked, including happiness, sadness, fear, anger, guilt, pride, and shame. The order of emotions was randomized for each child. In the current study, we focused on children's responses to basic negative emotions (sadness, anger, and fear), given that the CCNES measure pertains to maternal reactions to these emotions.

Children's responses in the EK task were coded into categories that address conceptually distinct types of situations (Yang & Wang, 2016). For example, categories of situations that make people feel sad include "losing desirable objects," "unable to engage in desirable activities," "being hurt physically," and so forth. The number of unique categories children provided for each emotion was counted, yielding three scores for the three basic negative emotions, respectively. We then created a composite score of EK by averaging scores for sadness, fear, and anger.

Two trained research assistants coded children's responses. For each cultural group, one research assistant coded the data and a second assistant coded 20% of the data independently for reliability check. Both coders were blind to the study hypotheses. The average inter-coder reliability r across all emotions was .87 for EA children, and .89 for CI children. Disagreements were discussed and resolved among the coders.

Children's coping strategies. At time 2, mothers filled out a modified version of Children's Coping Strategies Checklist (CCSC; Ayers, Sandier, West, & Roosa, 1996). In this checklist, mothers were asked to mark an X next to each statement that was true for their children's behavior over the last month when they were in a stressful situation. CCSC includes 54 items assessing four major dimensions: active coping strategies (i.e., problem-focused coping and positive cognitive restructuring), distraction strategies (i.e., distracting actions and physical release of emotions), avoidance strategies (i.e., avoidant actions, repression, and wishful thinking), and support-seeking strategies (i.e., seeking support for actions and feeling). We scored 1 for each checked item and 0 for each unchecked item, and then summed scores of the items under each major coping dimension to index children's coping. Consistent with the psychometric measures of this scale (Ayers et al., 1996), Cronbach's alphas in the current sample were .87, .80, .64, and .84 for active coping, distraction, avoidance, and support-seeking strategies, respectively.

Verbal skills. At both time points, mothers filled out a Child Communication Survey (Feagans & Farrans, 1997) that assessed children's verbal skills, with a 5-point scale from 1 (*well below average*) to 5 (*well above average*). CI mothers rated their children's verbal skills in English and Chinese, respectively. The scores for the language that children used in the interview were used in analyses. The verbal skills measure was included because verbal skills have been

shown to be related to a variety of child outcomes, such as emotion understanding (Doan & Wang, 2010), coping (Skinner & Zimmer-Gembeck, 2007), and psychological adjustment (Chen, Benet-Martinez, & Bond, 2008).

Results

Preliminary Analyses

Analyses with or without the CI child who was interviewed in Chinese showed the same pattern of results. Therefore, we presented results based on data of all children. Means and standard deviations of maternal and child variables are listed in Table 1.

Maternal reactions to children's negative emotions (Time 1). To examine cultural similarities and differences in maternal reactions to children's negative emotions (Hypothesis 1), we conducted a 2 (culture) \times 2 (gender) MANCOVA on the scores of supportive and non-supportive reactions, with child age and verbal skills at Time 1 as covariates. Results revealed a significant effect of culture, $F(2, 101) = 32.08, p < .001, \eta_p^2 = .39$. Further separate ANCOVAs showed that, consistent with Hypothesis 1a, EA mothers used fewer non-supportive reactions than did CI mothers. However, EA and CI mothers used a similar level of supportive reactions, consistent with Hypothesis 1b.

Relations of Maternal Reactions to Child Outcomes

To examine the relations of maternal supportive and non-supportive reactions to children's socio-emotional outcomes, we conducted a series of hierarchical linear regressions on children's psychological adjustment, EK, and coping. In each regression, we entered culture, child age, gender, and verbal skills as predictors in the first step. Then we entered the supportive reactions or non-supportive reactions in the second step. In the third step, we entered the interaction terms of Culture \times Supportive reactions or Culture \times Non-supportive reactions. Thus,

the effects of supportive and non-supportive reactions presented below were all after controlling for child culture, gender, age, and verbal skills. All independent variables in the regressions were centered. The regression coefficients and the change of R^2 for models examining the effects of maternal reactions on children's psychological adjustment, EK, and coping are presented respectively in Table 2, Table 3, and Table 4.

The concurrent relations of maternal reactions to children's psychological adjustment at Time 1. Consistent with Hypothesis 2, across two cultural groups, supportive reactions were positively associated with children's adaptive skills and negatively associated with children's behavioral symptoms index. There were no interaction effects of Culture \times Supportive reactions. On the other hand, in support of Hypothesis 3, we found significant interaction effects of Culture \times Non-supportive reactions on externalizing problems internalizing problems, and behavioral symptoms index. Specifically, for EA children, maternal non-supportive reactions were associated with increased externalizing problems, $t = 2.04$, $p = .047$, $\beta = .28$, $\eta_p^2 = .08$, internalizing problems, $t = 1.75$, $p = .09$, $\beta = .25$, $\eta_p^2 = .06$, and behavioral symptoms index, $t = 2.07$, $p = .04$, $\beta = .26$, $\eta_p^2 = .08$, consistent with Hypothesis 3a, but it had no significant effect for CI children's externalizing problems, $t = -.67$, $p = .50$, $\beta = -.09$, $\eta_p^2 = .01$, internalizing problems, $t = -1.11$, $p = .27$, $\beta = -.16$, $\eta_p^2 = .03$, or behavioral symptoms index, $t = -1.43$, $p = .16$, $\beta = -.19$, $\eta_p^2 = .05$, consistent with Hypothesis 3b. The interaction effects of Culture \times Non-supportive reactions on children's psychological adjustment are illustrated in Figure 1a, 1b, and 1c.

The prospective relations of maternal reactions at Time 1 to children's EK at Time 2. The main effect of supportive reactions was not significant in predicting children's EK, in contrast to Hypothesis 2. However, there was a significant interaction effect of Culture \times Non-

supportive reactions on children's EK, which supports Hypothesis 3. Specifically, whereas maternal non-supportive reactions at age 7 were associated with less EK at age 8 for EA children, $t = -1.52, p = .14, \beta = -.19, \eta_p^2 = .05$, the relation was positive for CI children, $t = 1.45, p = .15, \beta = .20, \eta_p^2 = .04$, although the correlation coefficients were not significant for either culture. The interaction effect is illustrated in Figure 1d.

The prospective relations of maternal reactions at Time 1 to children's coping at Time 2. For both cultural groups, maternal supportive reactions when children were age 7 positively predicted children's use of active coping strategies at age 8, which supports Hypothesis 2. On the other hand, there was a main effect of maternal non-supportive reactions on children's use of distraction strategies, qualified by a significant interaction of Culture \times Non-supportive reactions, consistent with Hypothesis 3. For EA children, maternal non-supportive reactions at age 7 positively predicted children's use of distraction strategies at age 8, $t = 3.20, p = .002, \beta = .43, \eta_p^2 = .17$, but it had no significant effect for CI children, $t = .93, p = .36, \beta = .14, \eta_p^2 = .02$, in line with Hypothesis 3a and 3b, respectively. The interaction effect is illustrated in Figure 1e.

Discussion

The current study examines European American and Chinese immigrant mothers' reactions to children's negative emotions in relation to children's socio-emotional development in a cross-cultural context. The results revealed cultural similarities and differences in the strategies European American and Chinese immigrant mothers used in dealing with children's negative emotions, and the critical role of culture in moderating the relations between maternal behaviors and children's socio-emotional outcomes. They highlight the importance of

understanding the functional meaning of family socialization practices in specific cultural contexts.

As predicted, Chinese immigrant mothers reported using more non-supportive strategies dealing with children's negative emotions than did European American mothers, but the two groups adopted the same level of supportive strategies. Similar cultural differences have been found between European American and Indian immigrant mothers (McCord & Raval, 2016). What constitutes supportive or non-supportive reactions may vary by culture. In European American culture, emotions are often encouraged to be expressed to reflect the uniqueness of the self (Markus & Kitayama, 2001). Strategies that control or inhibit the expression of emotions are considered unconstructive or even harmful and therefore are infrequently used by European American mothers. In contrast, in Chinese culture, non-supportive strategies, such as punishment and minimization, are viewed as an indication of parental involvement and therefore are acceptable and considered useful for regulating negative emotions which might disrupt group harmony (Chao, 1994). As a result, non-supportive reactions have been endorsed by Asians including Chinese immigrant mothers (Chan, Bowes, & Wyver, 2009; Raval & Martini, 2009). Supportive strategies, on the other hand, are considered constructive and nurturing in both European American and Asian cultures (McCord & Raval, 2016). Therefore, European American and Chinese immigrant mothers adopted supportive strategies on the same level to facilitate children's socio-emotional development.

Furthermore, in support of our hypotheses, children whose mothers used more supportive reactions showed better psychological adjustment and more adaptive coping across both cultures. This is consistent with prior literature that maternal supportive strategies may help parents provide a secure environment for children to explore emotions (Cassidy, 1994). Also, children

may model the appropriate ways to regulate their own emotions and emotionally driven behaviors by observing how their parents cope with emotions (Fabes et al., 2002). Thus, regardless of culture, maternal supportive responses facilitate children's social and emotional skills and help them adapt well in social environments, and also protect children from behavioral problems.

In contrast, the relations between maternal non-supportive reactions and child outcomes differed in the European American and Chinese immigrant samples. Consistent with previous findings (Gottman et al., 1997; Eisenberg et al., 1996), European American children whose mothers reported using more non-supportive responses exhibited more behavioral problems and more often used maladaptive coping strategies such as distraction. However, our findings suggest that maternal non-supportive reactions may not be inherently related to socio-emotional problems in all cultures. For Chinese immigrant children, maternal non-supportive reactions showed no negative effects, but even had a trend of positive effects on their socio-emotional outcomes with small effect sizes ($\eta_p^2 = .01-.05$). In a context where group harmony is greatly emphasized, negative emotions can be disruptive, and expression and communication of emotions are supposed to be restricted (Markus & Kitayama, 1991; Wang, 2006). Non-supportive parental reactions, such as punishment and minimization strategies, may be constructive in this context to allow parents to control children's negative emotions, help children learn social expectations and display rules, and further achieve the goal of maintaining harmonious social interactions. Therefore, it is possible that non-supportive reactions may facilitate children's fitting in these cultures and, in turn, promote child socio-emotional outcomes, although with small effect sizes. Additionally, Chinese children perceive non-supportive reactions as more acceptable than do European American children (Helwig et al.,

2014). When a parenting practice is considered relatively normative or acceptable in a culture, its negative effects on child outcomes are somewhat mitigated (Camras et al., 2012; Deater-Deckard & Dodge, 1997; Gershoff et al., 2010; Lansford et al., 2005). Furthermore, negative emotional expressions in such cultures may be considered a sign of weakness and vulnerability. Parental non-supportive reactions may protect children in these environments by restricting their expressions of emotions.

Contrary to the current finding, one previous study revealed negative effects of maternal non-supportive reactions on child outcomes in China (Tao, Zhou, & Wang, 2010). As discussed earlier, the sample in this study was drawn from Beijing, one of the biggest cities in China, where cultural norms about emotions have changed dramatically in the past several decades due to the market-oriented economic reform and Western influences. For example, from two samples of children in Shanghai, another big city in China, Liu and his colleagues (2012) found different relations between child shyness and adjustment at different historical times. Children's shyness was positively correlated with competence, leadership, and academic achievement in their 1994 cohort, but negatively associated with peer preference and positively associated with loneliness in their 2008 cohort. However, among children in rural China, where people uphold more traditional values, shyness is still positively correlated with adjustment (Chen, Wang, & Cao, 2011). Therefore, in addition to Chinese immigrant families, Chinese families in rural areas are another group deserving investigation to further understand the function of parental emotional socialization in different cultural contexts.

Although the present study yielded original findings concerning family socialization and child outcomes in specific cultural contexts, there were some limitations. First of all, we used mothers' report to assess maternal reactions as well as children's coping and psychological

adjustment. Although this approach is appropriate for children of this age group and has been extensively adopted in previous studies (e.g., Eisenberg et al., 1999), additional measures such as direct observations of mothers' and children's behavior would help to corroborate the current findings. Second, although our data are longitudinal, the possibility of bidirectional relations cannot be eliminated. Third, it is challenging to interpret the null findings among Chinese immigrant children. Further studies with larger sample sizes are needed to test the potential small-but-meaningful effects. Finally, some of the measures, such as CCNES, were designed in a European American setting. Further studies should tailor the measures to other cultures. Also, it will be fruitful to study co-parenting practices on emotion socialization given that family dynamics, and mother-father interactions affect children's socio-emotional functioning (Parke & McDowell, 1998).

Despite these limitations, the findings of the present study have important implications for both theory and practice. They highlight the important role of culture in shaping the meaning and function of parenting practices for children's socio-emotional development. Whereas maternal supportive reactions were facilitative to child positive development in both European American and Chinese immigrant families, maternal non-supportive reactions seemed to be "non-supportive" only in the European American cultural context. These findings are particularly valuable for intervention programs targeted to immigrant children, in which immigrant parents may be advised to socialize their children in line with their family and cultural values and meanwhile to prepare children for socio-emotional competence in their host culture. Furthermore, it is critical for clinicians and practitioners to be sensitive to cultural diversity and to consider the cultural context in their practices. Intervention programs and treatment plans should also take the family's cultural background into account.

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Table 1

Means and standard deviations of both mother's and child's variables

	Time 1						Time 2					
	EA		CI		<i>F</i>	<i>p</i>	EA		CI		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>Mother variables</i>												
Supportive reactions	5.49	.63	5.32	.55	2.55	.11	-	-	-	-		
Non-supportive reactions	2.14	.60	3.18	.66	61.18	<.001	-	-	-	-		
<i>Child variables</i>												
Verbal skills	68.23	10.54	62.80	9.38	6.37	.01	68.60	11.14	63.95	10.75	4.28	.04
Externalizing problems	48.98	9.02	46.89	7.38	3.15	.08	-	-	-	-		
Internalizing problems	48.05	7.80	48.20	7.24	.01	.91	-	-	-	-		
BSI	49.20	8.25	49.72	6.25	.40	.53						
Adaptive skills	51.41	7.15	45.75	6.67	8.40	.01	-	-	-	-		
Emotion Knowledge	-	-	-	-			3.77	1.56	4.12	1.28	4.07	.046
Active coping	-	-	-	-			12.19	5.85	6.96	3.75	19.36	<.001
Support-seeking	-	-	-	-			6.04	2.61	2.57	2.06	55.40	<.001
Distraction	-	-	-	-			5.56	2.40	3.43	2.47	14.54	<.001
Avoidance	-	-	-	-			3.78	2.55	2.51	1.77	7.58	.01

Note. BSI represents behavioral symptoms index.

Table 2

Hierarchical Multiple Regression Analyses for Maternal Supportive and Non-supportive Reactions Predicting Children's Psychological Adjustment

Predictors		Psychological Adjustment															
		Externalizing				Internalizing				Adaptive skills				BSI			
		β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>
<i>The model of supportive reactions</i>																	
<i>Step 1</i>	Control variables			.10	.30			.02	.678			.37	<.001			.16	.001
	Culture	-.21	.032			-.01	.957			-.22	.005			-.09	.310		
	Gender	-.20	.039			-.05	.651			.15	.054			-.18	.046		
	Age	.05	.570			-.11	.255			.13	.094			.01	.893		
	Verbal skills	-.20	.051			-.07	.539			.43	<.001			-.36	<.001		
<i>Step 2</i>	Supportive reactions	-.15	.123	.02	.131	.02	.847	<.001	.849	.26	.001	.07	.001	-.27	.003	.07	.003
<i>Step 3</i>	Culture \times Support	.07	.476	.004	.476	-.008	.939	<.001	.939	.003	.972	<.001	.972	.08	.385	.01	.385
<i>The model of non-supportive reactions</i>																	
<i>Step 1</i>	Control variables			.10	.030			.02	.669			.37	<.001			.16	.001
	Culture	-.31	.013			-.08	.520			-.28	.008			-.15	.191		
	Gender	-.15	.121			-.02	.818			.11	.173			-.11	.224		
	Age	.04	.681			-.10	.334			.13	.109			.001	.993		
	Verbal skills	-.19	.053			-.07	.483			.44	<.001			-.37	<.001		
<i>Step 2</i>	Non-supportive	.18	.171	.002	.636	.12	.358	<.001	.943	.07	.555	.01	.190	.13	.300	<.001	.842
<i>Step 3</i>	Culture \times Non-sup	-.21	.047	.04	.047	-.23	.038	.04	.038	.11	.228	.01	.228	-.26	.011	.05	.011

Note. All variables entered in the models were centered. After centering, the value of Culture for EA was -0.5, for CI was 0.5. The value of Gender for Male was -0.5, for Female was 0.5. BSI represents behavioral symptoms index.

Table 3

Hierarchical Multiple Regression Analyses for Maternal Supportive and Non-supportive Reactions Predicting Children's Emotion

Knowledge

Predictors	EK			
	β	<i>p</i>	ΔR^2	<i>p</i>
<i>The model of supportive reactions</i>				
<i>Step 1</i> Control variables			.13	.012
Culture	.19	.065		
Gender	.22	.027		
Age	.23	.019		
Verbal skills	.06	.561		
<i>Step 2</i> Supportive reactions	.08	.408	.01	.301
<i>Step 3</i> Culture \times Support	.05	.623	.007	.382
<i>The model of non-supportive reactions</i>				
<i>Step 1</i> Control variables			.13	.011
Culture	.24	.061		
Gender	.18	.064		
Age	.25	.011		
Verbal skills	.04	.712		
<i>Step 2</i> Non-supportive	-.11	.434	.001	.787
<i>Step 3</i> Culture \times Non-sup	2.08	.040	.04	.040

Note. All variables entered in the models were centered. After centering, the value of Culture for EA was -0.5, for CI was 0.5. The value of Gender for Male was -0.5, for Female was 0.5.

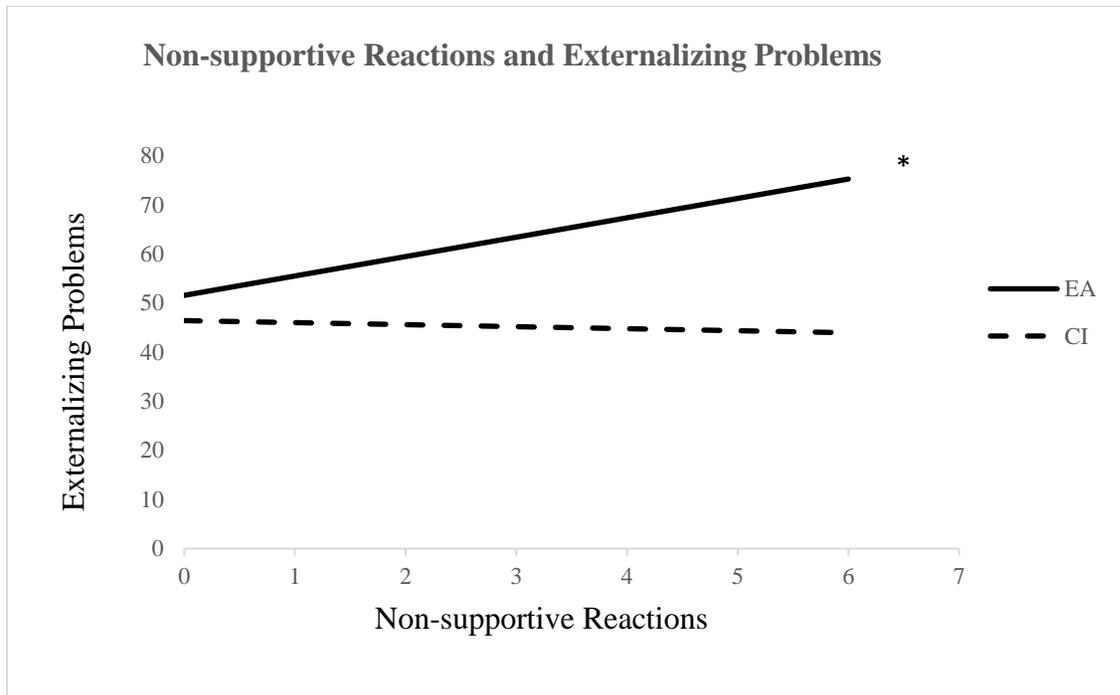
Table 4

Hierarchical Multiple Regression Analyses for Maternal Supportive and Non-supportive Reactions Predicting Children's Coping Strategies

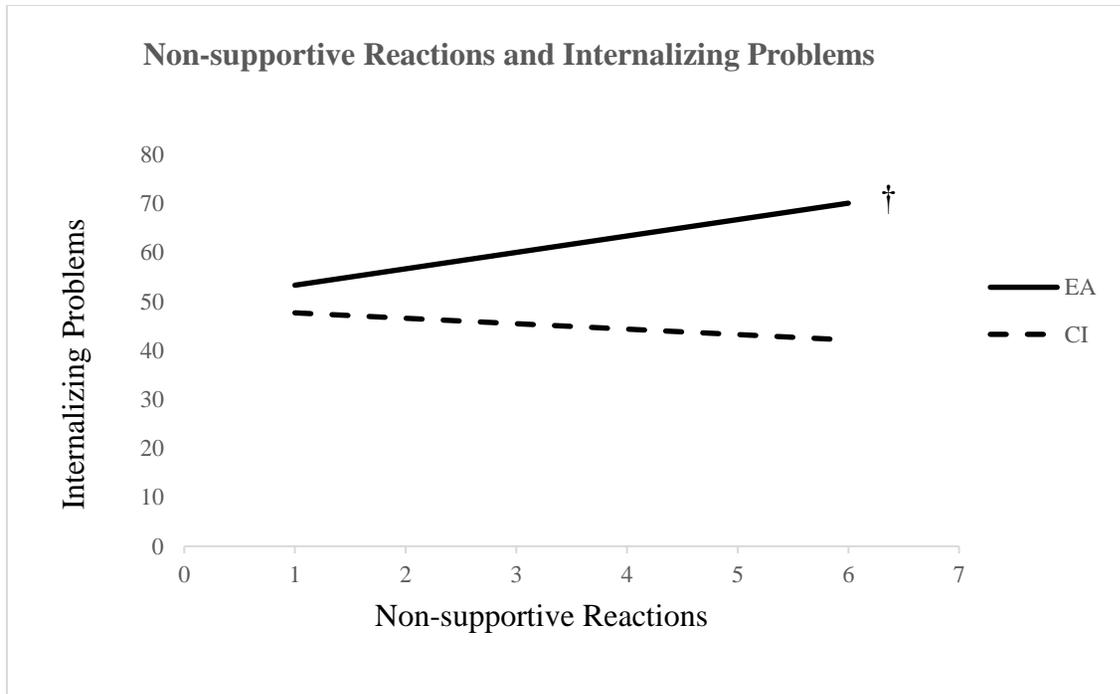
Predictors	Coping Strategies																
	Distraction				Active coping				Support-seeking				Avoidance				
	β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>	β	<i>p</i>	ΔR^2	<i>p</i>	
<i>The model of supportive reactions</i>																	
<i>Step 1</i>	Control variables			.19	.001			.29	<.001			.41	<.001			.17	.001
	Culture	-.35	.001					-.39	<.001			-.57	<.001			-.27	.008
	Gender	.04	.656					-.03	.777			-.06	.471			.06	.548
	Age	.07	.494					-.02	.798			-.19	.018			-.30	.002
	Verbal skills	.15	.137					.31	.001			.20	.024			.11	.275
<i>Step 2</i>	Supportive reactions	.12	.200	.02	.178	.20	.024	.04	.021	.12	.134	.02	.125	.07	.438	.005	.454
<i>Step 3</i>	Culture × Support	.12	.212	.01	.212	.06	.465	.004	.465	.04	.612	.002	.612	-.05	.575	.003	.575
<i>The model of non-supportive reactions</i>																	
<i>Step 1</i>	Control variables			.19	.001			.29	<.001			.41	<.001			.17	.001
	Culture	-.58	<.001					-.48	<.001			-.53	<.001			-.22	.083
	Gender	.07	.4630					-.03	.714			-.09	.302			.03	.782
	Age	.04	.658					-.02	.796			-.19	.026			-.30	.003
	Verbal skills	.16	.101					.30	.002			.18	.035			.12	.250
<i>Step 2</i>	Non-supportive	.40	.003	.05	.018	.15	.241	.01	.260	-.08	.512	<.001	.930	-.09	.507	<.001	.976
<i>Step 3</i>	Culture × Non-sup	-.21	.049	.03	.049	-.04	.696	.001	.696	.11	.223	.01	.223	.15	.179	.02	.179

Note. All variables entered in the models were centered. After centering, the value of Culture for EA was -0.5, for CI was 0.5. The

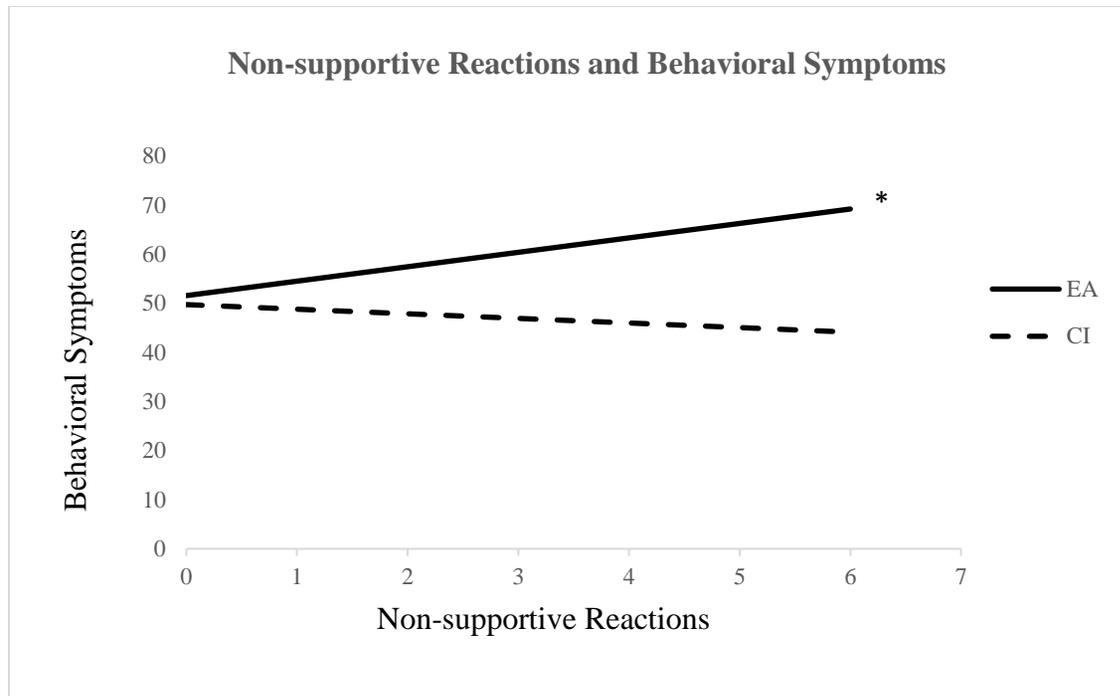
value of Gender for Male was -0.5, for Female was 0.5.



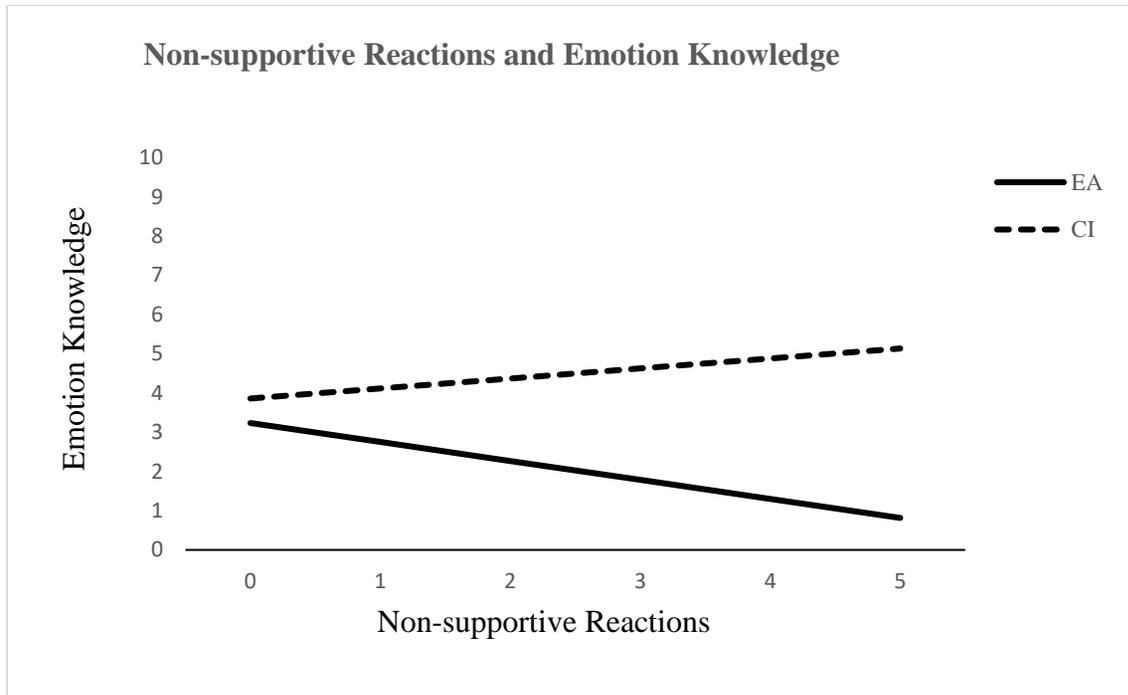
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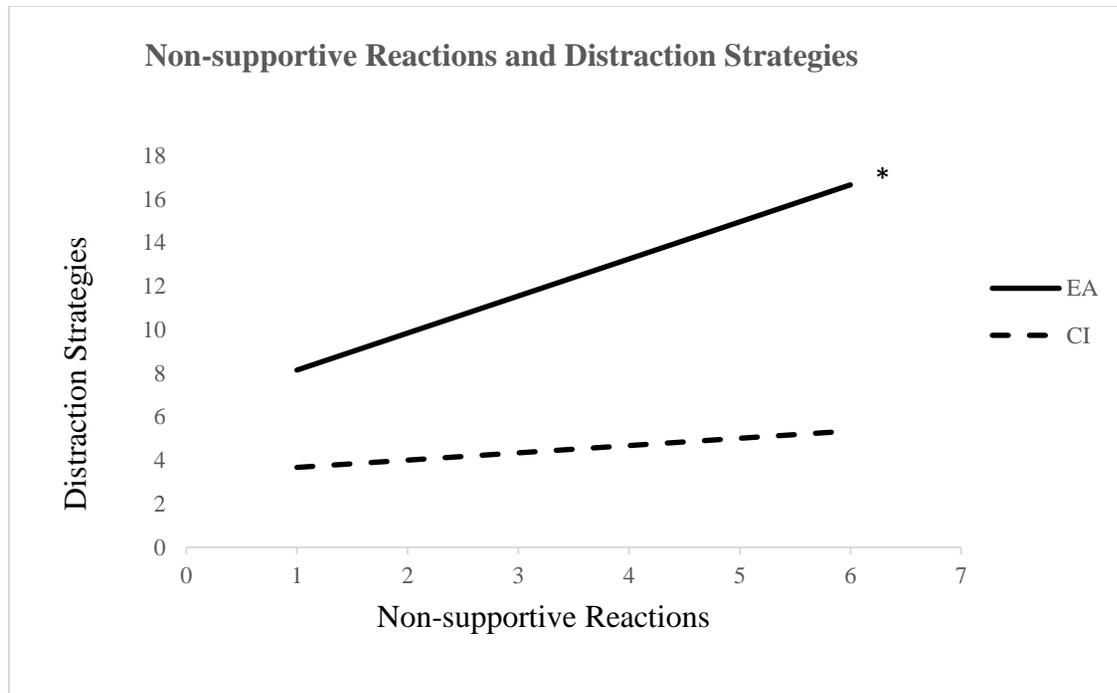
b



c



d



e

Figure 1. Culture moderated the relations between maternal non-supportive reactions and child outcomes.

The interaction effects of Culture \times Non-supportive reactions were statistically significant, $p < .05$. The simple effects for each cultural group were denoted by the symbol beside the regression lines.

† $p < .1$ * $p < .05$ ** $p < .01$ *** $p < .001$