The Relationship between Chinese Parents’ Reaction to Children’s Negative Emotions and Children’s Understanding of Emotions

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The purpose of this study was to investigate Chinese parents’ reaction to their children’s negative emotions and how these reactions relate to their children’s understanding of emotions. Forty-two Chinese children (aged 4) and their parents participated in this study. Coping with Children’s Negative Emotion Scale was given to parents to assess their reaction to their children’s negative emotions. Children’s emotional understanding was assessed using the modified emotional false-belief task and mixed emotion task. The results showed that Chinese parents gave supportive reactions more than non-supportive reactions to their children, and no difference in sex was found. The percentages of correct answers to false-belief task and mixed emotion task were low with no gender difference in both tasks. When age and sex of children were controlled, only fathers’ supportive reactions to children’s negative emotions significantly explained the variances in the level of children’s understanding of emotions in both tasks. That is, children whose fathers showed greater supportive reactions to their negative emotions performed better at both tasks. It was concluded that fathers’ supportive reactions to their children’s negative emotions are very influential for emotional understanding among 4-year-old children in China.

Keywords: Children’s understanding of emotion, parents’ emotional reaction, negative emotions, Chinese parents

In recent years, children’s emotional competence has emerged as one of the major issues in the study of child development. Denham, Blair, DeMulder, Levitas, Sawyer, and Auerbach Major (2003) have suggested that emotional competence is related to children’s social competence which is an index of how well children can interact with other people and understand about their own status among peers. Trentacosta and Izard (2007) recently indicated that understanding of emotions could predict social and academic competence in later years. Children’s understanding of their emotions, their ability to talk about them, and their ability to read the emotional signals of others affect their personal and social adjustment as well as their academic performance. Consistent with these findings, many researchers found that children who had better understanding of emotions were not only more prosocially responsive to their peers, but also rated as more socially competent by teachers and more liked by their peers (Denham, 1986; Denham, McKinley, Couchoud, & Holt, 1990; Strayer, 1980).

Children’s Understanding of Emotions

Emotional competence for children generally includes three components: the ability to
understand emotion, to express emotions, and to regulate their own emotions (Halberstadt, Denham, & Dunsmore, 2001). In this article, we focus on the first component. Understanding emotion includes the ability to recognize and label one’s own and others’ emotions, connect them to the situations, understand their causes, and recognize the disparity between emotional displays and felt emotions (Campos & Barrett, 1984; Denham, 1998). By attributing the mental states of others, children make people’s behavior meaningful and predictable. Children’s understanding of emotions includes nine emotional abilities (Denham, 1998): (1) labeling emotional expressions, both verbally and nonverbally; (2) identifying emotion-eliciting situations; (3) understanding the causes of emotion-eliciting situations as well as the consequences of specific emotional responses; (4) using emotional language to describe their own emotional experiences and to clarify those of others; (5) recognizing that others’ emotional experience can differ from their own; (6) knowing about emotion regulation strategies; (7) acquiring a knowledge of emotion display rules; (8) knowing how more than one emotion may be felt simultaneously, even when these emotions conflict with each other or are ambivalent; (9) beginning to understand complex social and self-conscious emotions.

Preschoolers’ emotional understanding has been studied using various tasks including emotion recognition tasks, emotional perspective taking tasks, cultural display rule tasks (Denham et al., 1990), emotional false-belief tasks (Hughes & Dunn, 1998), and mixed emotion tasks (Brown & Dunn, 1996). Although all these tasks were used to measure children’s understanding of emotion, one cannot assume that all of the tasks may be used to assess the same ability (or component) of emotional understanding. In an emotion recognition task, participants were asked to identify emotions using pictures of facial expressions, either through verbal labeling or nonverbal pointing. An emotional perspective taking tasks were used to assess their understanding of a puppet’s emotions. A cultural display rule task was used to measure children’s knowledge about emotional expressions appropriate to culture rules. The Emotional False-Belief Task (EFBT) was designed to measure whether children understood that a person’s beliefs will determine their emotional reactions to a situation (Bradmetz & Schneider, 1999). Hughes and Dunn (1998) reported that EFBT has moderate to strong concurrent and longitudinal associations with other emotional understanding tasks, because the EFBT assesses both the understanding of a belief-based action and the understanding that a person’s emotional reactions depend on one’s belief. They also found that the strength of correlation between EFBT scores and theory of mind is not significantly different from the correlation between EFBT scores and emotional understanding among 4- and 5-year-olds. Additionally, Hughes and colleagues (2000) reported fair to moderate test-retest reliability for the EFBT over a 4-week period for the 4-year-olds.

The difference between EFBT and False-belief task is that EFBT added two emotion questions to the original false-belief task based on the study of Harris and Lipian (1989). EFBT could be used to assess preschool children’s belief-based emotion understanding specifically, rather than other components of emotional understanding, such as mixed emotion understanding, moral emotion understanding, etc. The advantage of this task is that it requires minimum language ability because the task is shown to children by using two dolls acting. Thus, the message is conveyed in a visual rather than verbal way.

Mixed-emotion Task (MET) is used to measure whether children understand that a person may have multiple or even contradictory (ambivalent) emotional responses to a given situation (Brown & Dunn, 1996). A substantial body of research has examined this ability among children older than age 4. However, a few studies suggest that 4-year-olds are able to describe how a person can simultaneously have two conflicting feelings such as happy/mad, sad/happy, mad/sad, or sad/mad (Kestenbaum &
Gelman, 1995). Although this suggests that even 4-year-old children can attend to multiple features of emotions simultaneously, this task requires a high level of language ability as it is conducted by verbal descriptions. Therefore, MET only focuses on the ability to understand mixed emotions; it could not assess other components of emotional understanding of children.

In previous research, most investigators have assessed children’s understanding of only one or two components by using only one or two measures (Pons, Harris, & de Rosnay, 2004). To obtain more knowledge about 4-year-old preschoolers’ understanding of emotions, assessing both emotional false-belief understanding and mixed emotion understanding are needed. It is expected that the emotional false-belief task assesses one’s understanding that a person’s beliefs determine his or her emotional reaction to a situation, and that mixed emotion tasks measure one’s understanding that a person may have multiple or even contradictory (ambiguous) emotional responses to a given situation.

Parenting and Children’s Understanding of Emotions

During the last two decades, a growing body of research has been conducted on young children’s understanding of emotion and the associated variables (Denham et al., 1990). However, further research is still needed that thoroughly elucidates parents’ roles in the development of children’s emotions. The literature on the parents’ contributions to children’s emotional development generally talked about three possible mechanisms of parental socialization of emotion: (1) parental expression of emotion, (2) parental reactions to their children’s emotions, and (3) parental teaching about emotions (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997).

Current theorizing and empirical findings suggest that parents’ positive emotional expressions and experiences, their accepting and helpful reactions to children’s emotions, and their emphasis on teaching about emotions in the family contributed to their young children’s more sophisticated understanding of emotion (Gottman, Katz, & Hooven, 1997; Tomkins, 1991). Parents’ emotional expressions show children which emotions are acceptable in what contexts. Children learn from their parents’ expressions about the nature of emotions and personal causes. Denham and colleagues (1997) showed that parents who displayed emotions more positively had children who showed more positive emotions with peers and were thus more socially competent. Furthermore, exposure to well-modulated negative emotions was related to good understanding of emotion (Garner, Jones, & Miner, 1994). However, parents’ frequent and intense negative emotions may disturb children and discourage self-confidence, resulting in a poor understanding of emotions.

Children of parents who support or encourage expressions have more access to their own emotions than those of parents who minimize expressions, and thus come to better understand emotions (Gottman, Katz, & Hooven, 1997). Denham and Kochanoff (2002) found that those children who had better emotional understanding had mothers who showed more positive emotions, reacted more sensitively to their children’s emotions, and taught more about emotions. In contrast, parents’ negative responsiveness, such as reacting with anger to children’s sadness, anger, or punitive reactions hindered the process of learning about emotions. Minimizing children’s emotional expressions are known as the negative predictors of emotion understanding (Denham et al., 1997; Garner et al., 1994).

Parents’ sharing of emotional experiences and their explaining, talking, or teaching about emotions were also found to be associated with children’s understanding of emotions (Denham et al., 1997; Lunkenheimer, Shields, & Cortina, 2007). The attitude of parental coaching or teaching about emotions could be displayed in an involving or dismissing manner. Involving parenting includes teaching children about emotional cues, helping them to understand and manage their own responses, and analyzing
social interactions into manageable components (Denham, Mason, & Couchoud, 1995). In contrast, dismissing parents ignored children’s emotions in an effort to “make it better” (Denham, Renwick-DeBardi, & Hewes, 1994). Many studies found that involving parents who explained and analyzed emotions had children who were good at understanding emotions (Denham, Cook, & Zoller, 1992; Denham, Zoller, & Couchoud, 1994).

Although parents’ salient role in the socialization of children’s emotional development has been acknowledged in earlier studies, little attention has been given to explain the mechanism of how parental reactions or behaviors influence children’s socioemotional development. Furthermore, research on the relationship of children’s emotional ability and family emotional atmosphere has demonstrated inconsistent findings (Halberstadt, Crisp, & Eaton, 1999). Halberstadt, Crisp, & Eaton (1999) suggested that parents’ positive facial expressions were clearly associated with positive outcomes in children’s understanding of emotions. However, parents’ negative facial expressions were not always found to have a negative impact on children’s understanding of emotions because children from families which have mild to moderate negative expressiveness would need to become more sensitive to subtle displays of emotion in their families, and thus, would develop greater understanding of emotion. Therefore, more studies need to be done to explore the mechanisms which might explain how parents’ emotional reactions affect children’s emotional competence.

Investigators have also suggested that parents’ reactions to children’s everyday negative emotions such as distress, fear, sadness, and anger are crucial for children’s emotional and social competence (Eisenberg, Fabes, & Murphy, 1996; Gottman, Katz, & Hooven, 1996). From parents’ reactions, children have the opportunity to learn to interpret their emotions, respond appropriately, and choose the best regulation strategies for action. Buck (1984) has suggested that parents who punish their children when they express negative expressions might lead to bad outcomes for the children in later life. These children gradually learn to hide their overt expressions of emotion but experience heightened physiological reactivity in emotion-evoking contexts. They learn to feel more anxious in emotionally evocative situations due to prior repeated associations between emotional expressivity and punishment.

Previous research on parents’ reactions to their children’s emotions have investigated parental emotion related behaviors and their reference to emotional outcomes (Maccoby & Martin, 1983). However, few researchers have been specifically concerned with how parents affect children’s understanding of emotions. Among those few researchers, Eisenberg, Cumberland, and Spinrad (1998) categorized parents’ reactions to their children’s negative emotional displays into supportive and non-supportive reactions. Supportive parents attempt to comfort the child, or teach the child ways to manage their emotion and cope with the stressful contexts. However, non-supportive parents avoid having contact with their children or avoid responding to their children’s negative emotions; they also punish or minimize the child’s emotional experiences (Eisenberg & Fabes, 1994; Kliewer, Fearnow, & Miller, 1996).

Supportive parental reactions to children’s negative emotions have been expected to facilitate children’s understanding of emotions for several reasons (Eisenberg & Fabes, 1994). First, children whose parents encourage emotional expressions provide more access to recognizing their own emotions than those of parents who value maintenance of a less expressive child; these children thus come to understand emotions better (Denham et al., 1994; Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002; Gottman, Katz, & Hooven, 1997). Second, the quality of parents’ reactions to children’s negative emotion affects children’s emotional security, which in turn, may influence the quality of their understanding and responses to others’ emotions. Furthermore, parents who discuss their children’s negative emotions including possible causes and results may help children to better understand their own emotions.
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and the ways to deal with them in appropriate manner.

However, the link between parental supportive reactions and socioemotional competence has not been so clear. The link may be nonlinear and may vary by sex of the child and sex of the parent (Bryant, 1987). For example, high levels of parental encouragement of unregulated emotionality are unlikely to be associated with socially appropriate and competent behavior (Eisenberg, Fabes, & Murphy, 1996). Further, the expression of negative-submissive emotions other than negative-dominant emotions is generally considered more acceptable for girls than boys (Brody & Hall, 1993). Thus, the encouragement of moderate expressivity of negative emotions may be partially linked to boys’ social functioning (Eisenberg, Cumberland, & Spinrad, 1998).

On the other hand, parents’ negative reactions to children’s emotions such as reactions that are punitive or dismissing may impede children’s ability to regulate physiological arousal and to process information about emotional events (Denham et al., 1994; Eisenberg, Fabes, & Murphy, 1996; Gottman, Katz, & Hooven, 1997). This may also lead children to view emotions as threatening and to avoid emotionally challenging situations, ultimately missing the opportunities to learn about or to cope with negative emotions (Eisenberg, Cumberland, & Spinrad, 1998). Punitive reactions which are directly or indirectly telling the child to stop showing an emotion and ignoring the child’s emotions are also one of the predictors which negatively affect emotional understanding (Denham et al., 1997).

The Role of Fathers

The relationship between nonsupportive parental reactions and children’s outcomes is likely to be bidirectional. Parents who reported higher levels of nonsupportive reactions to children’s negative emotions tend to view their children (especially sons) as being inclined to express negative emotions (Eisenberg, & Fabes, 1994; Eisenberg, Fabes, & Murphy, 1996). Eisenberg, Cumberland and Spinrad (1998) argued that it may be possible that difficult children elicit more negative parental reactions, and parental negative reactions also provoke children’s negative emotions and behaviors.

Studies of parental reactions to children’s emotions have typically been conducted with mothers only. Researchers found that mothers outperform fathers in terms of emotional socialization, and have a greater effect on children’s emotional socialization. For example, children’s emotional skills have shown greater influence of maternal than paternal socialization (Kliewer, Fearnow, & Miller, 1996). However, McElwain, Halberstadt, and Völling (2007) suggested that in a “systems view” of emotion socialization, families should be viewed as social systems in which all members interact with each other with different influences on the children. Therefore, to examine parents’ influence on their children’s emotional development, both fathers’ and mothers’ emotional socialization should be studied.

In one of the few studies to include both mothers and fathers, Denham et al. (1997) reported that children showed lower emotional understanding when mothers and fathers together exhibited greater negative reinforcement of negative emotion. In addition, Denham & Kochanoff (2002) tested mothers and fathers reactions separately and found that mother’s socialization of emotion had a stronger relationship to children’ emotional development than the fathers’. They explained that fathers may be talking more about the control of emotion rather than about its nature or subtle causes and consequences of emotional expression. In addition, the father’s role in the family is more known to be a playmate, while the mother’s role is more known to be a manager or advisor.

However, other studies suggested that mothers’ and fathers’ reactions to children’s emotions might play a unique role in children’s socioemotional development (Rohner & Veneziano, 2001; Völling, McElwain, Notaro, & Herrera, 2002). Rohner and Veneziano (2001) found that influence of a father’s love on children’s development is as great as and
occasionally greater than the influence of a mother love. They argue that paternal love is the sole significant predictor of specific outcomes after controlling love for the maternal influence.

Recently, McElwain, Halberstadt, and Volling (2007) examined fathers’ and mothers’ joint contributions, and found that when one parent reported low support, greater support by another parent was related to children’s better understanding of emotions. But when one parent reported high support, greater support by another parent was associated with lower scores of emotional understanding. The divergent reactions from fathers and mothers, the research suggested, will benefit children in understanding complex emotions (McElwain, Halberstadt, & Volling, 2007).

Parenting and Emotional Expression in Chinese Contexts

The study of emotional development has long been recognized for its complexity because emotional development appears to be the product of multiple “levels” working all at the same time. These levels are comprised of within-individual, within interaction, within-relationship, and within-group factors (Hinde, 1995). Moreover, each of these social levels is influenced by the cultural macrosystem (Bronfenbrenner & Crouter, 1983).

It can be questioned whether the mechanism of parents’ role on children’s emotional understanding may be generalized in different cultural contexts. Cultural norms and value systems may guide and be reflected in parental goals, beliefs, expectations, and behaviors. Confucian traditions are influential in the predominant Chinese culture. As Ho (1994) describes, “In Confucian societies, the guiding principle governing socialization is embodied in the ethic of filial piety. This principle organizes and stamps the child’s learning experiences. Among the filial precepts are: obeying and honoring one’s parents...and in general conducting oneself so as to bring honor and not disgrace to the family name.” Recently, Lieber, Fung, and Leung (2006) concretized this Confucian tradition into four belief dimensions: Training, Shame, Autonomy, and Authoritative. These represent the general beliefs of Chinese parenting and may guide parents’ behaviors and interactions with their children.

Chinese parenting styles are different from other cultures. Compared with Western parents, Chinese parents are more controlling and protective in their child rearing (Lin & Fu, 1990). Chinese parents emphasize behavioral control and obedience, and often encourage their young children to be dependent on them (Ho, 1986). Furthermore, similar parenting styles may have different meanings in different cultures. For example, parent control is referred to as Chiao shun in Chinese, which corresponds to authoritarian parenting in Western studies. Although parental control is known to be commonly associated with poor school achievement and damaging children’s development in Western culture, it did not appear to have a negative effect on Asian student’s academic performance (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). According to Chao and Sue (1996), this parenting style was shown to enhance rather than damage children’s development, because Chinese children may view it as a natural extension of high parental expectations.

According to the aforementioned Confucian tradition, emotions (especially negative emotions) were viewed as dangerous and disruptive for interpersonal relations, and emotional moderation by emphasizing social harmony over individual expression was valued (Soto, Levenson, & Ebling, 2005; Bond, 1991). The underlying assumption here is that emotions are considered to be more disruptive to the social harmony than being helpful. In this view, emotional expression in Chinese culture is not so much discouraged or suppressed, but rather ignored. In addition, Chinese often manifest emotions as physical or bodily symptoms related to illness (e.g., complaining of a stomachache when angry) rather than expressing or experiencing emotions verbally and behaviorally. In traditional Chinese medicine, extreme emotions are thought to cause illness (Wu &
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Tseng, 1985).

Empirical studies of these notions based on measurement of understanding of emotion tasks have been rarely reported. Wang (2001) studied American and Chinese mothers and their 3-year-old children chatting about children’s experienced happiness, sadness, fear, or anger at home. American mother–child conversations showed an “emotion-explaning style” in which mothers and children provided rich causal explanations for antecedents of emotions. Chinese mother–child conversations employed an “emotion-criticizing style” that focused on installing proper behavior in the child and gave few explanations for the emotion itself.

Therefore, the purpose of this study was to investigate children’s emotional understanding with more than one task and parents’ socialization of their children’s negative emotions in the Chinese cultural context. The specific research questions are as follows:

1. How do Chinese fathers and mothers respectively react to their children’s negative emotions? Do fathers’ and mothers’ reactions to children’s negative emotions differ by the sex of children?

2. How are Chinese children’s understanding of emotions? Is there difference in sex in regards to children’s understanding of emotions?

3. What is the relationship between parents’ reactions to their children’s negative emotions and children’s understanding of emotions?

Method

Participants

Forty-two 4-year-old children (17 boys and 25 girls) from a Kindergarten in Shanghai, China and their parents participated in this study. The children’s ages ranged from 48 to 60 months, with a mean age of 53 months (SD= 3.85). All children were first-born and the only child in the family. Mothers’ ages ranged from 27 to 38 years, with a mean age of 32 years (SD= 2.57). Fathers’ age ranged from 26 to 44 years, with a mean age of 34 years (SD= 4.00). The median annual income of the families was $7,038. According to the SES standard reported by the Shanghai Statistic Bureau (2005), 90.5% of the parents in this sample belonged to the lower middle class, and 9.5% belonged to the middle class. The mean schooling years for both mothers and fathers was 14 years.

Measures

Parents’ Reactions to Children’s Negative Emotions. Coping with Children’s Negative Emotions Scale (CCNES) developed by Fabes et al. (2002) was translated into Chinese and used to assess how parents typically respond to their young children’s negative emotions. This self-report scale presents parents with 12 hypothetical scenarios in which their children expressed negative emotions such as upset and angry. These hypothetical situations represent emotionally evocative events that young children are exposed to. Parents were asked to rate on the 7 point-scale of responding to the scenario in each of six possible responses to children’s negative emotions. Parents’ responses were categorized into six coping styles. The six coping styles were clustered into two types: supportive reactions and nonsupportive reactions. Internal consistency was .68 and .80 for the ratings of mothers and fathers, respectively.

Emotional False-belief Task. The modified “Sally-Ann” false belief task (Chen, Cui, & Wang, 2005) originally developed by Baron-Cohen, Leslie, and Frith (1985) was used to measure emotional false-belief understanding. It includes two trials. In each trial, the child was told a story in which Honghong puts a toy in one location and leaves. Then, Lanlan moves the toy to a second location. Honghong returns to the scene and the experimenter ask children five questions to assess different dimension of emotional false-belief understanding. In each trial, children received 1 point for a correct response to the false-belief question. Children received an additional point per trial for correct responses to the two emotion questions, given a correct response on the false-belief question.
Children were told two versions of the story with different toys and different beginning and ending locations. The toys (ball, car) and locations (white box, black box) were randomly assigned across trials. In Questions 4 and 5, the order of the two emotion choices (i.e., happy or sad) was counterbalanced across trials. Internal consistency of the two trials was .90.

**Mixed Emotion Task.** A Chinese version of the story task based on Dong and Yang’s (2007) study was used to assess children’s understanding of mixed emotions. Children were told two stories in which a protagonist could feel two opposite emotions of the same valence (e.g. receiving a present, but having to wait to open it). In the first story, children were told that the protagonist experienced two conflicting emotions and were asked to explain why the protagonist felt both emotions (only explain condition). If the child provided an explanation for only one emotion, a standard probe was used to elicit an explanation for the second emotion. In the second story, the protagonist’s emotions were not named, and the child was asked how the protagonist felt and why (detect/explain condition). If the child named only one emotion, standard probes were used to elicit a second emotion and explanation.

For each story, children received 1 point for explaining one emotion (e.g., “Mad because he wanted to open the present.”), and received 2 points for explaining two emotions of the opposite valence (e.g., “Happy because he likes to get presents, but mad because he can’t open it”). Children did not receive any credit for explanations that simply repeated the story situation or if the causal link between the situation and emotion was unclear. Scores were summed across the two stories, with a possible range from 0 to 6. Internal consistency of the two stories was .88.

**Peabody Picture Vocabulary Test-Revised (PPVT-R).** The Taiwan version of Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1997) was used to assess children’s language ability. The standard scores from this interview were used in this study. Internal consistency was .69.

**Procedures**

One week before interviewing the children, a set of questionnaires (CNNES) was given to the parents and the completed questionnaires were retrieved one week later. Children were interviewed in an observing room of a kindergarten in Shanghai, China from Oct. 16, 2008 to Oct. 26, 2008. Children’s interviews were conducted in three sessions, with each session conducted for 10 minutes. In the first session, children were tested by an interviewer using PPVTR. In the second session, Emotion false-belief task which comprised of two stories was conducted. To make sure that children’s attention focused on the task, two minutes of free-play time was arranged between the two stories. Children’s answers to the questions were recorded on the answer sheet. In the third session, the mixed emotion story task which contained two stories was administered, with a two-minute break between the stories. Children’s responses to the questions were recorded verbatim.

**Data Analyses**

To examine the first and second research questions, descriptive statistics and paired t-test were conducted, and Pearson’s correlation analysis for the third question. To analyze the predictability of father- and mother-reported reactions to children’s understanding of emotions, two step-wised hierarchical multiple regression analyses were conducted. Child age and sex were entered in Step 1, and mother- and father-reported supportive reactions were entered in Step 2.

**Results**

**Parents’ Reactions to Their Children’s Negative Emotions**

When considering parents’ supportive and
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Table 1
Parents’ Reactions to Children’s Negative Emotions: Means, Standard Deviations and Paired t-test (N=42)

<table>
<thead>
<tr>
<th>Child Sex</th>
<th>Total (n=42)</th>
<th>Paired-t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys (n=17)</td>
<td>Girls (n=25)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Supportive Reactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>8.76(2.49)</td>
<td>9.24(2.20)</td>
</tr>
<tr>
<td>Father</td>
<td>9.88(2.83)</td>
<td>9.80(2.37)</td>
</tr>
<tr>
<td>Nonsupportive Reactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>5.12(1.62)</td>
<td>4.68(1.57)</td>
</tr>
<tr>
<td>Father</td>
<td>5.06(1.53)</td>
<td>4.16(1.65)</td>
</tr>
</tbody>
</table>

nonsupportive reactions to children’s negative emotions separately, parents reported more supportive reactions than non-supportive reactions to their children’s negative emotions as shown in Table 1. Compared to mothers (M=9.05, SD=2.31), fathers reported higher supportive scores (M=9.83, SD=2.53). Also, fathers reported lower non-supportive scores (M=4.52, SD=1.65) than mothers (M=4.86, SD=1.59). When comparing the sex of children, there was no significant difference in parents’ supportive and non-supportive reactions as a function of the child’s sex. There was no significant difference in parents’ reactions as a function of the child’s sex.

Children’s Understanding of Emotion

By using two tasks to examine children’s understanding of emotion, the results are shown in Table 2. Children’s emotional understanding scores were low and differed by the task. That is, 31.0% of 4-year-olds were correct in the emotional false-belief task, and 11.9% were correct in the mixed emotion task. Comparing boys and girls separately, no significant sex difference was found in the scores of emotional false-belief task (M[girls]= 4.16, SD[girls]= 1.52, M[boys]= 3.88, SD[boys]= 1.65) and mixed emotion task (M[girls]= 3.12, SD[girls]= 1.74, M[boys]= 2.94, SD[boys]= 1.48).

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In order to examine the relationship between parents’ reactions to children’s negative emotions and children’s emotional understanding, the intercorrelation between the emotional false-
belief task and the mixed emotion task was analyzed. As shown in Table 3, the emotional false-belief and mixed emotion scores were significantly correlated to each other ($r=.422$, $p<.01$). Children’s age was significantly correlated with both false-belief ($r=.510$, $p<.01$) and mixed-emotion ($r=.608$, $p<.001$). Language was significantly correlated with mixed emotion understanding ($r=.390$, $p<.05$).

Because children’s age and language level were significantly correlated with children’s understanding of emotion, partial correlation between parents’ reactions and children’s understanding of emotion controlled for children’s age and language was conducted. As shown in Table 4, fathers’ reported supportive reactions to children’s negative emotions were significantly correlated with both false-belief ($r=.299$, $p<.10$) and mixed emotion understanding ($r=.413$, $p<.01$).

In addition, both fathers’ and mothers’ non-supportive reactions to children’s negative emotions were negatively correlated to emotional false-belief ($r[\text{mother}]=-.496$, $p<.001$; $r[\text{father}]=-.276$, $p<.10$) and mixed emotion understanding ($r[\text{mother}]=-.445$, $p<.01$; $r[\text{father}]=-.452$, $p<.01$).

In order to analyze the predictability of father- and mother-reported reactions to children’s understanding of emotion, two step-wised hierarchical multiple regression analyses were conducted. The results of multiple regression are shown in Table 5.

### Emotional False Belief Understanding

As shown in Table 5, child age and sex accounted for 26% of the variance in emotional false belief understanding ($F(1)=14.07$, $p<.01$), and child age made a unique contribution, such that older children demonstrated better emotional false belief understanding ($B=.21$, $p<.01$). In step...
2, mother and father reported supportive reactions together accounted for an additional 7% of the variance ($F(2)=9.68, p<.001$). Only fathers’ supportive reactions significantly predicted children’s higher emotional false-belief understanding ($B=1.99$, $p<.05$).

**Mixed Emotion Understanding**

Child age and sex accounted for 37% of the variance in mixed emotion understanding ($F(1)=23.47, p<.01$), and child age made a unique contribution. In other words, older children demonstrated greater mixed emotion understanding ($B=.26$, $p<.001$). Mother and father reported supportive reactions together accounted for an additional 11% of the variance ($F(2)=17.82, p<.001$). However, only father reported supports made a unique contribution. That is, children whose fathers reported greater supportive reactions to their negative emotions demonstrated better mixed emotion understanding ($B=2.54$, $p<.01$).

In sum, fathers’ supportive reactions to their children’s negative emotions significantly predicted children’s emotional false belief understanding and mixed emotion understanding. That is, children whose fathers reported greater supportive reactions to their negative emotions demonstrated better false belief understanding and mixed emotion understanding.

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**Discussion**

**Chinese Parents’ Reactions to Children’s Negative Emotions**

First, both fathers and mothers showed more supportive than nonsupportive reactions to their children’s negative emotions. Although there have been no studies on examining Chinese parents’ reactions to children’s emotions, the result of this study is consistent with most of previous findings from the U.S. Denham and Kochanoff (2002) studied 3 to 5-year old children’s emotion understanding and parents’ reactions to their children’s negative emotions by using the Coping with Children’s Negative Emotion Scale (CCNEN). They found that both fathers and mothers showed more supportive reactions to children’s negative emotions than nonsupportive reactions. Another study by Eisenberg, Fabes, and Murphy (1996) also found that parents showed more supportive reactions to children’s negative emotions such as encouragement of expression and problem focused reactions than negative reactions.

Second, it was also found that fathers’ scores of supportive reactions were higher than mothers’ scores. This result partially supports Chen, Li, Li, and Liu’s (2000) arguments. In their study, it was found that Chinese fathers cared a great deal for their children’s social and academic development. They suggested that Chinese
fathers were more responsible for children’s social and academic development than mothers. Moreover, another study by Chen, Liu, and Li (2000) argued that children viewed their fathers and mothers as being involved to largely the same extent in different aspects of parenting. There was no significant difference between Chinese fathers and mothers on warmth and indulgence for their children. However, in the Western literature, Chinese fathers were often described less active than western fathers in child-rearing, especially in affective involvement (Larson & Richards, 1994; Parke & Buriel, 1998). In contrast to the result of this study, many Western studies suggest that paternal socialization has a greater influence on children (Kliewer, Fearnow, & Miller, 1996; Denham & Kochanoff, 2002). The findings of greater paternal supportive reactions might also be related to the cultural emphasis on the father’s role in their children’s social and emotional development in Chinese families (Ho, 1987).

Third, parents’ supportive reactions statistically did not differ by the sex of children. Previous research investigating parenting in China showed that Chinese parents over concerned about boys than girls, especially in rural areas, and the continued preference for sons were found in most areas in China (John, Wang, Nancy, & Zhao, 1992; Arnold & Liu, 1986). Our finding is more consistent with the findings from Eisenberg, et al. (1998) and Denham et al. (1997) who have suggested that parents’ emotional socialization to boys and girls are similar.

There are two possible explanations for the reason why there was no sex difference in parents’ supportive reactions to children’s negative emotions in China. First, since the “One child per family” policy implemented in 1970s, a “four-two-one” family structure (four grandparents, two parents, and one child) has become increasingly common in China, especially in rural areas. The only one child is viewed as Du mio, meaning “the only seedling of the entire family tree.” Therefore, regardless of gender, the sole Du mio is treasured by all family members. This notion could well be supported by the study of Tsui and Rich (2002) who suggested that gender equality in education is an unintended consequence of the one child per family policy under China’s current social and economic conditions. Second, the modernization of China might be another possible reason. Since “the reform and opening up policy,” Chinese parents had more access to Western culture and more opportunities to adopt Western values, which emphasizes gender equality. However, there needs to be more studies to make any further conclusions because the sample size of the present study was too small to represent all Chinese parents.

Children’s Understanding of Emotion

In general, 4-year old Chinese children’s scores in emotional false-belief task and mixed emotion tasks were low. This finding is consistent with most of the previous studies. For example, Winter and Vaillance (1994) found that understanding of mixed emotion tasks were hard for 4-year-olds, and it was not until 5 years of age that children could predict multiple emotions of the same intensity and same valence to affect eliciting situations. Wellman, Cross, and Watson (2001) also found that 4- to 5-year-old children generally were unable to recognize the impact of beliefs on emotion although they were accurate in recognizing the impact of thoughts and beliefs on action.

It turned out that American children had better performances at every age point than Chinese peers. Wang and Leichtman (2000) explained that this difference might be due to the differences in early narrative practices between American and Chinese families. When sharing memories and telling stories, American mothers showed a high elaborative, independently oriented style and had lengthy talks with their children about the past; they focused on specific episodes, provided rich information about the events, and invited children to co-construct stories about their shared experiences. In contrast, Chinese mothers provided little embellishment or detail about past memories, and often tried to elicit moral rules and behavioral standards.
Furthermore, all participants of this study are the only child in the family, and this special context in China might also affect children’s emotional development. Studies of siblings’ effects on children’s emotional development found that sibling relations provide an important context for the development of children’s understanding of their social, emotional, and cognitive worlds (Volling, 2003). In particular, siblings play an important role in the development of children’s understanding of others’ minds, namely their understanding of emotion, thoughts, intentions and beliefs (Dunn, 2002). Thus, different culture and parenting might be another possible reason for explaining the relatively low performance of 4-year-old Chinese children on the emotional understanding tasks.

The level of children’s emotional understanding was different by task. Children did poorer in the mixed emotion task than in the emotional false belief task (11.9% and 31.0%, respectively). It appeared that false belief task and mixed emotion task have different degrees of difficulty for the 4-year-olds. As suggested by Pons, Harris, and de Rosnay (2004), mixed emotion understanding is the more complicated ability and it emerges after gaining the understanding of belief based emotion.

Secondly, there was no significant sex difference in both emotional false belief task and mixed emotion task. Girls scored higher but did not significantly outperform boys in both emotional false belief task and mixed emotion task. These findings were somewhat surprising considering that some previous studies had identified sex differences favoring girls. For example, girls performed significantly better than boys both on false belief task (Lim & Lee, 2007; Cervantes & Callanan, 1998; Leaper, Anderson, & Saunders, 1998) and mixed emotion task (Brown & Dunn, 1996). In addition, some studies found that girls exhibited a higher level of self-conscious emotion understanding and experience than boys (Bybee, 1998). However, some researchers found no sex differences in emotion understanding of children at this age (Banerjee & Yuill, 1999; Denham et al, 1992; Laible & Thompson, 1998), and this research adds some tentative support to their argument. An intriguing study by Laible and Thompson (1998) found that boys outperformed girls in explaining external causes of emotion. But girls were often found to have better performance in other components of emotional understanding. For example, girls did better at decoding others’ emotional expressions (Brown & Dunn, 1996) and girls expressed greater emotional regulation (Kochanska, 1994). Until now, there has been inconsistent evidence that there is sex difference in understanding of emotion. Future research should examine what specific component of emotional understanding (e.g., understanding of belief based emotion) may be related to the sex differences of children.

The Relationship between Chinese Parents’ Reaction to Children’s Negative Emotions and Children’s Understanding of Emotions

When child’s age and sex were controlled, only father’s supportive reactions were significantly correlated with children’s emotional false belief and mixed emotion task scores. Furthermore, only fathers’ supportive reactions explained 33% of the variance of children’s emotional false belief understanding and 48% of the variance of mixed emotion understanding.

Children performed better at both of the emotional understanding tasks when fathers showed greater supportive reactions to children’s negative emotions. This finding is inconsistent with other researchers’ findings that report more predictive power of the mothers’ socialization of emotion than for fathers’ (Denham & Kochanoff, 2002; Denham et al., 1994), but the result of the present study is consistent with Boyum and Parke’s (1995) findings. Boyum and Parke studied Caucasian parents and their 5-7 year-old children from the U.S. and found that fathers’ emotional socialization, especially their emotional reactions, predicted their children’s socioemotional competence more reliably than mothers’ emotion expressiveness.

Corresponding with this, Garner, Robertson, and Smith (1997) suggested that the influence of fathers’ emotional expressiveness is a
contributing factor to their preschool children’s socioemotional competence. Parke and McDowell (1998) also suggested that because compared to mothers, emotionally supportive fathers ask more questions about the causes or consequences of their children’s distress, this special style of paternal reaction thus contributed to their children’s better understanding of more complex aspects of others’ minds and emotions. Furthermore, some researchers argued that fathers tend to show more interest in their children’s negative emotions (e.g., anger), whereas mothers tend to worry about or be concerned with their children’s negative emotions (Hooven, Gottman, & Katz, 1995). Therefore, when asking children “who would you prefer to share your bad feelings with?” preschoolers reported that they would rather show sadness and anger more to fathers than mothers (Zeman & Shipman, 1997). Therefore, it might be possible that fathers have more opportunities to deal with their children’s negative emotions and their rational problem solving strategies may be related to the stronger correlation with children’s understanding of emotion.

The present results support much recent research done in China. Chen et al., (2000), Ho, (1987), Stevenson, Chen, and Lee, (1992), and Abbott, Zheng, Douglas, and Meredith (1992) suggested that compared with mothers, Chinese fathers were more heavily involved in their children’s education and were considered largely responsible for their children’s social and academic progress compared with their Western counterparts. Our results also agree in some ways with Chao and Tseng (2002) and Chen et al. (2000) who reported that in China, fathers are viewed as the predominant authority figure. Fathers are more important than mothers are to children’s social and academic competence. Thus, although in some of the literature fathers were found to have a weaker affect than mothers, recent studies have shown the tremendous importance of fathers’ role within the family in Western society. The present study’s results that fathers have a greater effect may reflect how Chinese fathers are becoming more influenced by Western values about parenting. It might also be suggested that, in modern China, fathers have more power and responsibility in childrearing in the family.

Most of the previous research investigating parental contributions to children’s socioemotional development only focused on mothers. However, with fathers’ increasing contributions to family life, examining both parent’s contributions to children’s socioemotional development seems timely. The present findings suggest that a more fully fleshing out of fathers’ contributions would be a future trend of a more precise study on parents’ influence. In conclusion, the critical role of Chinese fathers in their offspring’s emotional development needs to be more acknowledged.

For future research, it is suggested that: (1) more large-scale studies are needed to affirm these findings with more representative Chinese samples as current results may not generalize to the entire mainland Chinese population and all of its socioeconomic and ethnic groups; (2) Because self reporting only measures parental perceptions of their behavior, future research should supplement self-report studies with observations of parental reactions to children’s negative emotions.

References

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