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Parental Expressivity and Parenting Styles in Chinese Families: Prospective and Unique Relations to Children's Psychological Adjustment

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SYNOPSIS

Objectives—Parents from different cultures differ in how frequently they express emotions. However, the generalizability of the relations between parental expressivity and child adjustment in non-Western cultures has not been extensively studied. The goal of the present study was to investigate prospective relations between parental expressivity within the family (positive, negative dominant, and negative submissive expressivity) and Chinese children's psychological adjustment, above and beyond parenting styles.

Design—The study used two waves (3.8 years apart) of longitudinal data from a sample ($n = 425$) of children in Beijing (mean ages = 7.7 years at T1 and 11.6 years at T2). Parental expressivity and parenting styles were self-reported. To reduce the potential measurement overlap, items that tap parental expression of emotions toward the child were removed from the parenting style measure. Children's adjustment was measured with parents', teachers', and peers' or children's reports.

Results—Consistent with findings with European American samples, parental negative dominant expressivity uniquely and positively predicted Chinese children's externalizing problems controlling for prior externalizing problems, parenting styles, and family SES. Neither parental expressivity nor parenting styles uniquely predicted social competence.

Conclusions—Despite previously reported cultural differences in the mean levels of parental expressivity, some of the socialization functions of parental expressivity found in Western countries can be generalized to Chinese families. Although parental expressivity and parenting

styles are related constructs, their unique relations to child's adjustment suggest that they should be examined as distinct processes.

INTRODUCTION

Parental expressivity is defined as a parent's "persistent pattern or style of exhibiting facial, body, vocal, and verbal expressions that are often but not exclusively emotional in nature" (Halberstadt, Crisp, & Eaton, 1999, p. 110). Parental expressivity has been associated with a spectrum of child adjustment outcomes in studies based primarily on European American families from emotional understanding and social competence to behavioral problems (Halberstadt, et al., 1999; Halberstadt & Eaton, 2002). However, the generalizability of these findings to non-Western families has not been examined in longitudinal studies. Cross-cultural researchers have suggested that Eastern and Western cultures differ in values towards emotion expression (e.g., Markus & Kitayama, 1991; Safdar et al., 2009). Consistent with this view, some cultural differences have been found in the mean levels of parents' emotional expressivity in the family (e.g., Camras, Chen, Bakeman, Norris & Cain, 2006; Camras, Kolmodin, & Chen, 2008). Despite these differences, it remains unclear whether relations between parental expressivity and child adjustment differ across cultures.

Several large-sample investigations of parenting style (a construct related to but distinct from parental expressivity) and children's adjustment in Chinese families found relations similar to those for European American samples (e.g., Chen, Dong, & Zhou, 1997; Chen, Liu, Li, Cen, & Chen, 2000; Nelson, Hart, Yang, Olsen, & Jin, 2006; Xu et al., 2005; Zhou et al., 2008). However, researchers have not examined whether parental expressivity in the family and parenting styles can uniquely predict child adjustment in Chinese families. Using a longitudinal sample of school-age children in urban China, the present study had two aims: (1) to examine prospective relations of parents' self-reported expressivity in the family to Chinese children's externalizing problems and social competence and (2) to examine whether parental expressivity uniquely predicts child adjustment controlling for parenting styles.

Parental Expressivity and its Relations to Children's Psychological Adjustment

Parental expressivity is often assessed with self- and other-reported questionnaires and/or behavioral observations (Halberstadt et al., 1999), with convergence found across methods and measures (Eisenberg et al., 2008). The research on parental expressivity has examined parental displays of emotions in two contexts: in parent-child dyadic interactions (Zhou et al., 2002) and within the broader family context (e.g., Camras et al., 2008). Previous research found parental expressivity in both contexts to be significantly and positively related (Valiente et al., 2004).

Because expressivity reflects one's relatively persistent patterns of emotion expressions across situations (even within the family context), it is viewed as a correlate of temperament or personality. Indeed, maternal personality has been prospectively related to mothers' self-reported family expressiveness, and both maternal personality and family expressiveness predict mothers' observed expressions of emotions while interacting with their toddlers during a free-play session (Smith et al., 2007).

Parental expressivity within the family is theorized to consist of three sub-dimensions based on the type and valence of emotions expressed. *Positive expressivity* refers to the display of positive emotions such as gratitude, laughing, and smiling. Although negative expressivity has sometimes been studied as a single construct, several researchers have recommended distinguishing negative dominant from negative submissive expressivity because they might show differential relations to child adjustment (e.g., Eisenberg, Cumberland, & Spinrad,

1998; Halberstadt, Cassidy, Stifer, Parke, & Fox, 1995; Halberstadt et al., 1999). *Negative dominant expressivity* refers to the display of hostile and dominant negative emotions, such as anger, contempt, and blaming, whereas *negative submissive expressivity* refers to the display of non-hostile negative emotions, such as sadness, apology, and embarrassment (Halberstadt, 1986; Halberstadt & Eaton, 2002).

Research using primarily European American samples has consistently found that parental positive expressivity within the family is negatively related to children's behavioral problems and positively related to their social competence (Halberstadt et al., 1999; Valiente et al., 2004). In contrast, the opposite relations have been found for parental negative dominant expressivity (see Eisenberg et al., 1998 and Halberstadt et al., 1999, for a review). The findings on negative submissive expressivity have been inconsistent. For example, it has been positively related to both positive (e.g., sympathy) and negative child outcomes (e.g., low levels of emotion regulation) (Eisenberg, et al., 1992; Garner, 1995). Thus, the relation of negative submissive expressivity to child adjustment is likely complex, such that it might depend on the specific adjustment outcome examined and/or the context in which the emotions are expressed (Halberstadt et al., 1999).

A number of psychological processes have been hypothesized as potential mechanisms in the parental expressivity-child adjustment linkage, including children's emotion regulation (or effortful control), empathy, and emotion understanding. For example, Hoffman (2000) hypothesized that parents' hostile or punitive negative expressivity (which might or might not be directed toward the child) likely leads to children's emotional overarousal, which in turn impairs their emotion regulation (also see Eisenberg et al., 1998). In contrast, parental positive expressivity is hypothesized to foster children's emotion regulation because it provides a sense of security and stability in parent-child relationships and family relationships in general (Cassidy, 1994). Indeed, children's effortful control (which reflects dispositional individual differences in emotion regulation) was found to mediate the relations between parental expressivity (in the family in general or in parent-child interactions) and child behavioral problems and social competence (e.g., Eisenberg, Gershoff, et al., 2001; Valiente et al., 2006).

There are some limitations in the existing work on parental expressivity and child adjustment. First, with one exception (Eisenberg, Liew, & Pidada, 2001), the majority of studies were conducted with primarily European American samples. Thus, the generalizability of the findings to non-European American cultures (especially to cultures with different values toward emotion expression) remains unknown. Second, few researchers have investigated whether the potential effects of parental expressivity on child adjustment are unique from the effects of parenting styles or parenting practices. A number of intervention studies have demonstrated that modifying parenting (e.g., through behavioral parent training programs that target warmth and discipline) can lead to improvement in children's mental health and competence outcomes (e.g., Beauchaine, Webster-Stratton, & Reid, 2005; Hinshaw et al., 2000; Zhou, Sandler, et al., 2008). However, it is unclear whether changes in the parent-child dyad occur independently of changes in the overall emotional climate of the family. Moreover, it is unclear whether parenting styles simply represent parental emotion that is directed toward the child (e.g., child-directed warmth and rejection), or whether they are dissociable processes that uniquely contribute to children's adjustment. Thus, testing the unique relations of parental expressivity and parenting styles to child adjustment can provide important empirical bases for the development of intervention programs to modify the impact of parental expressivity on child adjustment.

Cultural Influences on Parental Expressivity

Cultures differ in their values toward emotional expressivity (Markus & Kitayama, 1991; Matsumoto, Yoo, Fontaine, et al., 2008; Safdar et al., 2009). Compared to the Western cultures, Eastern cultures place greater emphases on collectivism, hierarchy, and embeddedness. These values are believed to promote a general restraint or control of emotions in the interest of maintaining group harmony (e.g., Markus & Kitayama, 1991; Matsumoto, Yoo, & Nakagawa, 2008; Safdar et al., 2009). Similarly, Confucian-based societies emphasize the doctrine of the mean, or an avoidance of extremes (Triandis, 1995). These cultural values may be reflected in Chinese parents' tendency to avoid extreme positive or negative emotions (Wu & Chao, 2005). Consistent with these theoretical views, previous cross-cultural comparisons have shown that Chinese or Chinese American adults score lower in self-reported emotional experience (Soto, Levenson, & Ebling, 2005), lower in parental positive expressivity (Camras et al., 2006; Camras, Kolmodin, & Chen, 2008), and are more restrained in vocal expressions (Anolli, Wang, Mantovani, & De Toni, 2008).

Tsai, Levenson, and McCoy (2006) examined whether group differences in emotional responses (e.g., emotional behavior, reports of emotional experience, and autonomic responses) could be attributed to temperament and cultural differences. Their comparisons of European American and Chinese American couples suggested that cultural factors contributed to differences in facial expression, vocal tone, and verbal content above and beyond temperament factors. While acknowledging contributions of temperamental factors in emotional response (e.g., in self-reports of emotional experience), Tsai et al. (2006) suggested that environmental (i.e., cultural) factors play a more primary role in shaping group differences in emotional behaviors.

Despite the fact that members of different cultures might differ in their mean levels of emotional expression, it remains unclear whether the *functions* of parental emotional expression differ across cultures. Specifically, do parental expressions of positive, negative dominant, or negative submissive emotions in the family show similar relations to children's psychological adjustment across cultures? To our knowledge, only one study examined the relation of parental expressivity to child adjustment in a non-Western sample. Similar to findings with Western samples, parental negative dominant and negative submissive expressivity were negatively related to Indonesian children's concurrent regulation and social functioning (Eisenberg, Liew, et al., 2001). However, in contrast to findings in Western cultures, parental positive expressivity was unrelated to Indonesian children's adjustment (Eisenberg, Liew, et al., 2001).

Because cultures differ in their relative levels of collectivism and individualism (Oyserman, 2002), it is important to examine relations of parental expressivity to child adjustment in different cultures. Eisenberg, Liew, et al. (2001), for example, suggested that the expression of strong positive emotion might be viewed as disruptive in Indonesian Javanese culture, a culture characterized as being at the extreme end of collectivism (Hofstede, 1991). Although China has been characterized in the psychological literature as a collectivist culture, it is likely that the sample of the present study – i.e., urban families from Beijing – is more individualist than the sample studied by Eisenberg and colleagues (2001). As such, it is possible that relations between parental expressivity and children's outcomes will be more similar to patterns seen in European American families.

A number of studies with Chinese populations have also showed that parenting dimensions of warmth and sensitivity are associated with positive child adjustment, with the opposite relations were found for parenting dimensions of rejection and coercion (Chang, Lansford, Schwartz, & Farver, 2004; Chang, Schwartz, Dodge, & McBride-Chang, 2003; Chen, Liu, & Li, 2000). Although parental warmth and rejection are most closely linked to parental

expressions of emotions in parent-child interactions, it is reasonable to expect that the parent's emotional style in the parent-child dyad may influence, or be influenced by, his/her emotional style in the family as a whole. In studies based on European American samples, observed parental warmth and sensitivity have been positively associated with parents' self-reported positive expressivity within the family, and negatively associated with parental negative dominant expressivity (Eisenberg et al., 2008; Smith et al., 2007). Thus, similar to findings based on European American samples, we expect parental positive expressivity to predict positive adjustment in Chinese children and parental negative dominant and negative submissive expressivity to predict negative adjustment.

Unique Contributions of Parental Expressivity and Parenting Styles to Child Outcomes

Our second goal was to examine the unique relations of parental expressivity and parenting styles to child adjustment. Parenting style is defined as "a constellation of attitudes toward the child that are communicated to the child and create an emotional climate in which parents' behaviors are expressed" (Darling & Steinberg, 1993; *p.* 493). Research on parenting styles has been largely influenced by Baumrind's (1971) classifications of authoritative (high warmth, high control/demandingness) and authoritarian parenting (low warmth, high demandingness/control).

The generalizability of parenting styles to Chinese culture has been an area of vigorous debate. Some researchers have argued that authoritative (e.g., high warmth, high demandingness) and authoritarian (low warmth and high demandingness) parenting do not fully capture the indigenous dimensions of Chinese parenting (e.g., training, Chao, 1994). Others have pointed out that Chinese parents are higher in authoritarian parenting and lower in authoritative parenting than European American parents (e.g., Lin & Fu, 1990; Wu et al., 2002), and that these parenting practices may have different implications for Chinese children's outcomes (Darling & Steinberg, 1993; Steinberg, Dornbusch, & Brown, 1992). Several large-sample studies (including a study using the same sample as the present one) have examined links of authoritative (high warmth and high demandingness) and authoritarian (low warmth and high demandingness) parenting to Chinese children's psychological adjustment. Consistent with findings in European American samples, authoritative parenting (especially warmth and responsiveness) predicted multiple positive adjustment outcomes in Chinese children (e.g., lower behavioral problems and higher competence), whereas the opposite relations were found for authoritarian parenting (especially coercive and harsh parenting) (e.g., Chen, Dong, & Zhou, 1997; Nelson et al., 2006; Xu et al., 2005; Zhou et al., 2008). Taken together, the above research suggests that the overall socialization functions of authoritative and authoritarian parenting are similar between European American and Chinese families. Importantly, Chen et al. (1997, 1998) emphasized that these similarities persist despite evidence that Chinese parents are more authoritarian and less authoritative than North American parents.

We view parenting style and parental expressivity as related but distinct constructs. From family systems theory, the mood, behavior, or interpersonal interactions in one family subsystem can influence another (Parke & Buriel, 2006). However, there are also conceptual distinctions between the two constructs. First, parental expressivity in the family includes emotional displays that may not be directed at the child and can therefore be seen as contributing to the overall emotional climate of the family. In contrast, parenting styles primarily reflect patterns of interactions in parent-child dyads. Second, although parenting styles involve parent's emotional expressions, they also involve parental attitudes and behaviors that are not necessarily "emotion-laden". Thus, it is important to examine the joint and unique relations of parenting styles and parental expressivity to child outcomes. For example, in predicting children's psychological outcomes, it is unclear whether parents' interactions with the child outweigh the parents' interactions with the family as a whole.

Similarly, it is unknown whether parental expressivity still exerts significant effects on child adjustment after controlling for the effects of parenting styles. To our knowledge, no previous research has examined these constructs in a single study, in either Asian or North American populations.

In summary, based on the hypothesized link between parental expressivity and parenting styles, and established relations between parenting styles and child adjustment (in both European American and Chinese families), we hypothesized that parenting styles and parental expressivity, despite some association between the two constructs, would predict some unique variance in Chinese children's adjustment.

METHOD

Participants

Data came from a two-wave (3.8 years apart) study of 425 1st- and 2nd-grade children (55.5% girls, M age = 7.7 years, SD = 0.6, range = 6.6–9.1 years) recruited from two public elementary schools in Beijing, P. R. China. Because of China's "one child" policy, 96% were the only children in their families. Most children (72%) came from two-parent families, 26% from households with parents and other extended family members, and 2% from single-parent families. Monthly family income ranged from 200 to 10000 RMB (M = 2446.6 RMB, SD = 1416.9). Parental education was reported on the following scale: 1 = 9 or fewer years (middle school or lower), 2 = 10 to 12 years (high school), 3 = 13 to 16 years (college), and 4 = greater than sixteen years (graduate school). Mean maternal and paternal education were 2.46 (SD = .66) and 2.49 (SD = .67), respectively (i.e. high school diploma to some college education). Based on the demographic statistics of urban Beijing, families in the sample were primarily low- to middle-income (National Bureau of Statistics of China, 2000).

At Time 2 (T2), 382 children (52.9% girls, M age = 11.6 years, SD = 0.6, age range = 10.1–12.9) from this sample were re-assessed (retention rate = 89.9%) when they were in 5th or 6th grade (48.2% in fifth grade). Compared to those who were retained, children assessed only at T1 (n = 43) tended to come from families of higher SES, $t(399) = -3.05$, $p < .01$. Parents completing T1 assessment only also reported higher authoritative parenting, $t(394) = -2.59$, $p < .05$, and higher positive expressivity $t(396) = -3.39$, $p < .01$. No differences were found for externalizing problems, social competence, or other measures of parenting or parental expressivity.

Procedures

An introductory letter and a written permission form were distributed to parents of all 1st- and 2nd- graders (N = 589) at two public schools in Beijing at T1 and to all 5th- and 6th- graders who participated in the T1 assessment (N = 387) at T2. At T1, 74% of the parent questionnaires were completed by mothers, 15% by fathers, 6% by other caregivers, and 5% did not specify. At T2, 78% of the parent questionnaires were completed by mothers, 12% by fathers, and 5% by other caregivers. Fourteen head teachers completed questionnaires for the participants in their classes. Children had different head teachers at T1 and T2 (return rates were 99% and 98% at T1 and T2). At both waves, parents and teachers were paid for their participation and children received a small gift.

Measures

The measures that had not been used previously in research with Chinese samples were translated into Chinese and back translated into English following the translation procedures recommended by Kim, Nair, Knight, Roosa, and Updegraff (2008).

Parental expressivity (T1)—Parents completed the 33-item version Self-Expressiveness in the Family Questionnaire (SEFQ; Halberstadt et al., 1995). Parents were instructed to rate the frequency with which they expressed each emotion during situations with family members using a 9-point scale (from 1 = *I rarely express these feelings* to 9 = *I frequently express these feelings*). This version of the SEFQ has shown good internal reliabilities (.71 to .90) and associations to children's adjustment outcomes in another Asian sample (Eisenberg, Liew, et al., 2001). In the present study, one item on the Negative Submissive scale ("Expressing sorrow when a pet dies") was dropped because it represented a scenario uncommon in Chinese families. Moreover, one item on the Negative Dominant scale was slightly modified (from "Criticizing someone for being late" to "Criticizing someone for making a mistake") because the latter was more common in Chinese families. The items are grouped into three subscales: (1) positive expressivity ($\alpha = .88$); (2) negative-dominant expressivity ($\alpha = .83$); and c) negative-submissive expressivity ($\alpha = .70$).

Confirmatory factor analysis was conducted to examine whether the three-factor model of SEFQ (i.e., Positive Expressivity, Negative Dominant Expressivity, and Negative Submissive Expressivity) fit our data. The CFA was conducted using maximum likelihood estimation in Mplus 5.2 (Muthen & Muthen, 1998–2007). Each observed variable (i.e., item score) was allowed to load on only one factor, and one variable loading in each factor was fixed to 1.0 for model identification. The remaining factor loadings, residual variances, intercepts, and correlations among latent factors were freely estimated. Moreover, the correlations among error variances of observed variables belong to the same latent factor were allowed to be correlated with each other if necessary for the model fit.

Hu and Bentler (1999) recommended the cutoffs of comparative fit index (*CFI*) .95, standardized root-mean-square residual (*SRMR*) .08, and root mean square error of approximation (*RMSEA*) .06 as criteria for a relatively good fit with the data and hypothesized model. According to these criteria, the original 3-factor model fit the Chinese sample poorly, $\chi^2(N = 400, df = 474) = 1151.1, p < .001, CFI = .839, RMSEA = .062, SRMR = .081$. An examination of the MIs and residuals of the covariance matrix suggested that the lack of fit came primarily from two sources: (1) five items ("Seeking approval for an action", "Showing how upset you are after a bad day", "Crying when a loved one goes away", "Apologizing for being late", and "Telling a family member how hurt you are") in the Negative-Submissive subscale had significant cross-loadings on the other two factors and (2) one item ("Expressing excitement over one's future plans") in the Positive Expressivity subscale had significant cross-loadings on the other two factors. After dropping these six items, the 3-factor model fit the Chinese data well, $\chi^2(N = 400, df = 302) = 557.28, p < .001, CFI = .92, RMSEA = .046, SRMR = .060$. All of the remaining items had significant and positive loadings on their designated factors (the standardized loadings ranged from .43 to .68). Alphas for the revised Positive Expressivity (12 items), Negative-Dominant Expressivity (10 items), and Negative Submissive Expressivity (5 items) subscales were .83, .86, and .66, respectively.

Parenting styles (T1)—Parenting styles were assessed via parents' self-reports on the authoritative and authoritarian parenting scales of the Chinese version of the Parenting Styles and Dimensions scale (PSD, Robinson, Mandleco, Olsen, & Hart, 1995). The authoritative scale includes four subscales: warmth/acceptance (9 items), reasoning/induction (8 items), easygoing/responsiveness (5 items), and encouragement of child's democratic participation (4 items). The authoritarian scale includes four subscales: non-reasoning/punitive strategies (5 items), corporal punishment (5 items), verbal hostility (4 items), and directiveness (3 items). For each item, parents rated how often they exhibit this behavior with the child using a 5-point scale (1 = *Never* to 5 = *Always*). The composite scores of authoritative and authoritarian parenting were formed by averaging the

corresponding item scores. The alpha reliabilities for parents' reports of authoritative parenting (26 items) and authoritarian parenting (17 items) were .89 and .82, respectively.

When examining relations between parenting styles and parental expressivity, it is important to consider the potential content overlap in their measures. Because some PSD items describe parental expression of emotions towards the child in the context of parenting (e.g., "I express affection by hugging, kissing, and holding my child"), potential item overlaps might exist between the measures of parenting style and parental expressivity (although the PSD taps parents' behaviors with the child and the SEFQ taps parents' behaviors with family members in general). To reduce the potential item overlap between the parenting style and parental expressivity measures, the first two authors independently reviewed PSD items and selected those items that directly involve parental expression of emotions with the child. A total of 10 PSD items were identified by the two judges (8 items were independently selected by both judges and 2 items were selected by a mutual agreement after discussion). Among the 10 items identified as potentially overlapping with the SEFQ, five items were in the Authoritative Parenting scale ("I give praise when my child is good", "I give comfort and understanding when my child is upset", "I express affection by hugging, kissing, and holding my child", "I joke and play with my child", and "I apologize to our child when making a mistake in parenting") and six items were in the Authoritarian Parenting scale ("I explode in anger towards my child", "I scold or criticize when my child's behavior doesn't meet my expectations", "I argue with my child", "I yell or shout when my child misbehaves", and "I use threats as punishment with little or no justification"). These 10 items were then dropped to avoid potential overlap between the parenting style and parental expressivity measures. Alphas for the shortened authoritative (20 items) and authoritarian (12 items) scales were .87 and .73, respectively. In data analyses, we reported the results using both the original PSD scales and the shortened PSD scales. A CFA was conducted to examine whether the two-factor model of the PSD scales (i.e., Authoritative and Authoritarian scales) fit our data. The two-factor model fit the data well, $\chi^2(N=403, df=240) = 457.971, p < .001, CFI = .902, RMSEA = .047, SRMR = .069$.

Child externalizing problems (T1 & T2)—At T1, parents ($\alpha = .87$) and teachers ($\alpha = .96$) rated children's externalizing problems (1 = *never* to 4 = *often*) on the 24-item Child Behavior Checklist (CBC; Lochman & Conduct Problems Prevention Research Group, 1995). Peer nominations of aggressive/disruptive behaviors were obtained using a 7-item subscale from the Chinese version of the Revised Class Play (Chen, Rubin, & Sun, 1992; Matsen, Morrison, & Pelligrini, 1985). Children were given a form listing 21 behavioral descriptors and the names of all students in the class. After the research assistant read each descriptor, children nominated up to three classmates who could best play the role if they were to direct a class play. Nominations of all classmates were used to compute each item score for each child. The item scores were standardized within the class to adjust for differences in the number of nominators. Item scores were averaged to compute a composite score ($\alpha = .92$).

At T2, parent and teacher-reported externalizing problems were assessed with the externalizing subscale of the Child Behavioral Checklist (CBCL; Achenbach, 2001; $\alpha = .84$ in the present sample), Teacher Report Form (TRF; Achenbach, 2001; $\alpha = .92$). Children's self-reported externalizing problems were collected with the Behavior Problem Index (BPI; Peterson & Zill, 1986; $\alpha = .76$). The CBCL and TRF externalizing scales include two subscales: rule-breaking behaviors and aggressive behaviors. The BPI externalizing scale includes 11 items, all of which are represented in the CBCL and TRF.

Child social competence (T1 & T2)—At both waves, social competence was assessed with parents' and teachers' ratings (1 = *really false* to 4 = *really true*) on a 4-item scale

adapted from Harter's Perceived Competence Scale for Children (HPCSC; Harter, 1979; Eisenberg et al., 1995). This subscale assesses children's socially appropriate behavior without reference to culturally specific expectations (e.g., "My/This child is usually well-behaved"; "My/This child usually acts appropriately"; α s at T1 and T2 = .65 and .70 for parents and .64 and .84 for teachers). In addition, at T1 only, peer reports of children's social competence were obtained using the 14-item sociability-leadership subscale (α = .95 in the present sample) in the Chinese version of the Revised Class Play (RCP; Chen et al., 1992; Matsen et al., 1985).

RESULTS

Zero-Order Correlations among Parental Expressivity, Parenting Styles, and Adjustment

Descriptive statistics of all study variables are presented in Table 1, and zero-order correlations among study variables are presented in Table 2. Below we highlighted the correlation results that are most relevant to our study hypotheses. First, significant positive correlations were found among parents', teachers', and peers' reports of children's externalizing problems and social competence at T1, among T2 parents', teachers', and children's reports of externalizing problems, and between T2 parents' and teachers' reports of social competence.

For cross-time relations between parental expressivity and child adjustment, T1 parental negative-dominant expressivity was positively correlated with T2 parents' and teachers' reports of externalizing problems, and negatively correlated with T2 teachers' reports of social competence. T1 positive expressivity was negatively correlated with parents' reports of externalizing problems at T2, and positively related to parents' reports of social competence at T2. T1 negative-submissive expressivity was negatively correlated with T2 teachers' reports of social competence.

For cross-time relations between parenting styles and child adjustment, T1 authoritative parenting was negatively correlated with T2 parents' and children's reports of externalizing problems and positively correlated with parents' and teachers' reports of social competence. T1 authoritarian parenting was positively correlated with T2 externalizing problems (by all three reporters) and negatively correlated with T2 social competence (both parents' and teachers' reports).

For concurrent relations between parental expressivity and parenting styles at T1, parental positive expressivity was positively correlated with authoritative parenting. Parental negative dominant expressivity and negative submissive expressivity were positively correlated with authoritarian parenting. The correlations between parental expressivity and parenting styles using the shortened parenting styles scales (after items tapping parental expression of emotions to the child were dropped) were similar to the correlations using the original parenting style scales (although the sizes of correlations were slightly smaller).

Unique and Prospective Relations of Parental Expressivity and Parenting Styles to Child Adjustment: Structural Equation Modeling

As shown in the zero-order correlations, both parental expressivity and parenting style were prospectively related to indicators of child adjustment. Moreover, dimensions of parental expressivity and parenting styles were correlated with each other. To examine the unique relations of parental expressivity and parenting styles to children's adjustment, structural equation modeling was used. Specifically, two hypothesized cross-time models were tested. In Model 1 (Figure 1), the three dimensions of parental expressivity (positive, negative dominant, and negative submissive expressivity) and the two dimensions of parenting styles (authoritative and authoritarian parenting) are hypothesized to predict the latent factor of T2

Child Externalizing Problems, which was indicated by parents', teachers', and children's reports. To control for cross-time stability in adjustment, the effect of T1 Child Externalizing Problems (indicated by parents', teachers', and peers' ratings) was controlled. In addition, the effect of the family SES index (created by first averaging maternal and paternal education and then averaging the standardized scores of parental education and family income) was controlled. Model 2 was similar to Model 1 except that the latent factor of T2 Child Social Competence (indicated by parents' and teachers' reports) was the criterion. Similar to Model 1, the effects of T1 adjustment (the latent factor of T1 Child Social Competence, indicated by parents', teachers', and peers' reports) and family SES were controlled in Model 2. In both models, the error variances of indicators measured from the same reporter (e.g., parents' reports of positive expressivity and parents' reports of externalizing problems at T1) were allowed to correlate with each other if, according to modification indices, doing so significantly improved the overall model fit. We first tested the models using the original parenting style scales, then using the shortened parenting styles scales to determine if results differed substantially.

Before conducting SEM, variables were screened for normality using the cutoffs for skewness (absolute value ≤ 2) and kurtosis (absolute value ≤ 7) suggested by West, Finch, and Curran (1995). Four variables were found to have high positive skewness: peer-ratings of externalizing problems at T1, peer ratings of social competence at T1, and parent and teacher ratings of externalizing problems at T2. Additionally, two variables (peer-rated externalizing problems at T1 and teacher-rated externalizing problems at T2) were found to have high kurtosis values. It is not uncommon for behavioral problem variables to be positively skewed in school-based samples. Given the presence of non-normal variables, SEM was conducted using the MLR estimator of Mplus 5.2 (Muthen & Muthen, 1998–2007), which provides the standard errors and chi-square statistics for data with non-normal outcomes (robust statistics, see Muthen & Muthen, 1998–2007). Missing data were addressed by using full information maximum likelihood (FIML, Muthen & Muthen, 1998–2007).

When using the original parenting style scales, the model for externalizing problems (Model 1) fit the data well, $\chi^2(df = 26, N = 425) = 35.45, p = .93, CFI = .98, RMSEA = .03, SRMR = .03$. As shown in Figure 1, in the measurement model, all of the model-estimated loadings for the two latent factors (T1 and T2 Child Externalizing Problems) were positively significant. In the structural model, the autoregressive path for externalizing problems was positive and significant, suggesting cross-time consistency in this construct. Family SES negatively predicted T2 Child Externalizing problems. Controlling for family SES and T1 Child Externalizing Problems, T1 negative dominant expressivity positively predicted, and T1 authoritative parenting negatively predicted, T2 Child Externalizing Problems. In addition, T1 authoritarian parenting positively predicted T2 Child Externalizing Problems. The model accounted for 44% of variance in T2 Child Externalizing Problems.

The model for social competence (Model 2) fit the data adequately, $\chi^2(df = 26, N = 425) = 55.03, p < .001, CFI = .93, RMSEA = .05, SRMR = .04$. In the measurement model, all the model-estimated loadings for T1 and T2 Child Social Competence were positively significant. The autoregressive path coefficient predicting T2 Child Social Competence from T1 Social Competence was positive and significant. However, controlling for T1 Child Social Competence and family SES, none of the parental expressivity and parenting style dimensions uniquely predicted T2 Child Social Competence.

The SEM results using the shortened parenting style sales were largely similar to the results reported above. We also conducted multiple-group SEM for Model 1 and Model 2 to test whether child sex moderated the paths in the model. Moderation by sex was not found. In

addition, no evidence for curvilinear relations between parent expressivity and child adjustment was found.

DISCUSSION

The present study made two contributions to the literature on parental expressivity. First, using a longitudinal sample, the study tested whether relations of parental expressivity to children's psychological adjustment can generalize to Chinese families. Despite previously reported cross-cultural differences in mean levels of individuals' (including parents') expressivity (e.g., Camras et al., 2006), our findings suggest that the socialization functions of parental expressivity in Chinese families are similar to those in European American families. Second, the study provided partial evidence that, although parental expression of emotions within the family and their parenting styles are interrelated, parental expressivity and parenting styles have unique relations to children's adjustment. Our study had two methodological strengths: (1) by assessing children's adjustment from multiple informants, we used SEM to examine the relations of parental expressivity and parenting styles to the latent constructs of externalizing problems and social competence as captured by multiple sources of data and (2) by controlling for cross-time consistency in child adjustment, our analyses provided a more stringent test of directional relations between parental expressivity or parenting styles and child adjustment.

Relations of Parental Expressivity to Chinese Children's Psychological Adjustment

To our knowledge, the present study is the first longitudinal investigation of relations of parental expressivity to child adjustment in a non-European American sample. Before examining the relations of parental expressivity to child adjustment, we tested the factor structure of a widely used instrument for parental expressivity within the family (SEFQ). Overall, the three-factor model showed an acceptable fit with the data, supporting the conceptual distinctions among positive, negative dominant, and negative submissive expressivity. However, a few items from the SEFQ had to be dropped because of their significant cross-loadings on other factors. We speculate that items could be problematic due to their relatively low frequency and/or their ambiguity in the valence of the emotions. For example, although "Crying when a loved one goes away" and "Apologizing for being late" reflect negative submissive emotions, they tend to have higher social approval than other negative submissive emotions. Because confirmatory factor analysis of the SEFQ has not been reported for Western samples, it is unclear whether the "problematic" items identified in the Chinese sample generalize to other populations.

Although previous research suggested that parents from different cultures vary in their mean levels of expressivity (e.g., Camras et al., 2006, 2008), which might be associated with cultural differences in values toward the expression of emotions (Matsumoto, Yoo, Fontaine, et al., 2008), few researchers have examined whether the association of parental expressivity in the family with children's psychological adjustment varies by cultures. Consistent with our hypotheses, parental negative dominant expressivity positively predicted externalizing problems (Figure 1). These relations were significant after controlling for the cross-time consistency in child externalizing problems, parenting styles, and family SES. Although parental expressivity did not predict Chinese children's social competence in the SEM analysis, parental expressivity was correlated with children's social competence at T2 (both within and across reporters, see Table 2). Thus, the nonsignificant paths from parental expressivity to child social competence in SEM might be attributed to the high level of consistency in children's social competence from T1 to T2. As indicated by correlation analyses, the cross-time correlations for social competence were in the moderate range ($r_s = .45$ and $.43$), whereas the cross-time correlations for externalizing problems were relatively small ($r_s = .34$ and $.25$). It is possible that because most children in our sample

remained in the same class with the same cohort of peers from T1 to T2, there were few rank-order changes in children's social competence across time, which allowed little room for the impact of parental behaviors. Additionally, although parental expressivity may influence children's externalizing problems through relatively direct mechanisms (e.g., modeling maladaptive emotional responses), the influence of parental expressivity on social competence may be more indirect. For example, Eisenberg et al. (1998) theorized that parental expressivity relates to children's ability to understand the emotional reactions of others, which in turn influences children's social interactions. Future research should explicitly test the potential mediating mechanisms (e.g., children's emotional understanding) underlying the relations between parental expressivity and child social competence.

Overall, the above results were consistent with those found in another 4-year longitudinal study involving predominantly European American children (Valiente et al., 2006), suggesting that the socialization functions of parental expressivity tend to be similar across cultures. Moreover, the within-time relations between parental negative-dominant and negative-submissive expressivity and child adjustment at T1 were similar to those reported in a cross-sectional study of Indonesian children (Eisenberg, Liew, et al., 2001). We noticed that in Table 2, there was an unexpected positive correlation (.20) between T1 parental positive expressivity and T1 parent report of child externalizing problems. However, this relation was not present for T1 teacher report of externalizing problems, and the correlations between parental positive expressivity and child social competence at both times and by all reporters were in the expected direction. Thus, our interpretation for this unexpected correlation was that parents high on positive expressivity might be more sensitive to and more likely to detect children's externalizing problems at T1.

As noted earlier, a similar phenomenon has been found with other parenting behaviors (e.g., physical discipline and psychological control). Despite the cultural differences in mean level of parental use of physical discipline and psychological control, high physical discipline or psychological control is associated with poorer child adjustment in both Western and Eastern families (Lansford et al., 2005; Wang, Pomerantz, & Chen, 2007). Because the present study did not include a comparable European American sample, we cannot test for cultural differences in the strengths of relations between parental expressivity and child adjustment. Studies that included cross-cultural comparable samples did find that culture moderates the strength of relations between parenting and child adjustment. For example, although parents' psychological autonomy support predicted better child adjustment in both the United States and China, the beneficial effects of psychological autonomy support were stronger in the United States than in China (Lansford et al., 2005; Wang et al., 2007). Thus, it is possible that, although culture does not moderate the direction of the parental expressivity-child adjustment relations, it might moderate the strength of the relations. This hypothesis can be tested in future research using cross-cultural comparable samples.

The Unique Relations of Parental Expressivity and Parenting Styles to Child Adjustment

Our study was one of the first to examine whether parental expressivity and parenting styles uniquely predict child adjustment. We found that parental expressivity and parenting styles were moderately correlated with each other (even after removing the potential item overlap in measures). These findings are consistent with the family system theory that one family member's emotions and behaviors in one family subsystem (e.g., parent-child relationship) might influence those in another family subsystem (e.g., parent-parent relationship, or the family unit system) (Parke & Buriel, 2006). Despite the interrelations between parental expressivity and parenting styles, results from SEM showed that parental expressivity (negative dominant expressivity) and parenting style (authoritative parenting) had unique relations to children's externalizing problems.

Limitations

The implications of the findings should be interpreted in light of study limitations. First, because the sample was drawn from working- to middle-class families in one of China's most industrialized cities, the findings might not generalize to Chinese families in rural or less industrialized areas. Second, because parents' cultural orientations were not assessed, the relations between culture and parental expressivity can not be directly examined. Third, because parental expressivity and parenting styles were only assessed through self-reports, it is unclear whether the findings can be generalized to other measures of expressivity. In future work, it would be useful to obtain multiple measures of parental expressivity and parenting styles. Finally, the present study did not examine potential relations of expressivity and parenting styles on internalizing problems. Future work that examines children's internalizing problems as a dependent variable will provide a fuller picture of how expressivity and parenting styles contribute to children's overall psychological adjustment. Despite these limitations, results from the present study provide new insight into the unique socialization functions of parental expressivity and parenting styles.

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Figure 1.

The Structural Equation Model Predicting T2 Child Externalizing Problems from T1 Parental Expressivity and Parenting styles. The variables/latent constructs within T1 were allowed to be intercorrelated. Top numbers represent standardized estimates. Numbers in parentheses represent unstandardized estimates. Non-significant paths are indicated by dotted lines. * $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 1

The Descriptive Statistics of Study Variables

	<i>N</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>	Skew	Kurtosis
Authoritarian Parenting (P) - T1	399	1.33	3.83	2.27	.44	.64	.97
Authoritative Parenting (P) - T1	396	1.58	4.80	3.72	.53	-.37	.10
Positive Expressivity (P) - T1	397	1.91	8.83	5.45	1.39	-.07	-.45
Negative Dominant Expressivity (P) - T1	398	1.00	7.80	3.47	1.18	.55	.71
Negative Submissive Expressivity (P) - T1	397	1.00	8.00	3.95	1.36	.17	-.22
Externalizing (P) - T1	401	1.04	3.26	2.07	.38	-.02	-.04
Externalizing (T) - T1	420	1.00	3.48	1.66	.56	.52	-.61
Externalizing (PE) - T1	382	-.62	4.35	-.04	.78	2.91	9.24
Social Comp (P) - T1	401	1.00	4.00	3.15	.51	-.67	.58
Social Comp (T) - T1	408	1.25	3.75	2.90	.52	-.85	.31
Social Comp (PE) - T1	382	-.78	4.34	.05	.79	2.37	6.39
Externalizing (P) - T2	373	.00	.88	.12	.14	2.01	5.19
Externalizing (T) - T2	372	.00	1.06	.09	.16	3.16	11.9
Externalizing (C) - T2	370	.00	1.36	.32	.27	1.12	1.08
Social Competence (P) - T2	377	1.50	4.00	3.31	.50	-.67	.14
Social Competence (T) - T2	372	1.00	4.00	3.13	.65	-.44	-.51

Notes. P = parent report, T = teacher report, PE = peer nomination, C = child report. T1 = Time 1, T2 = Time 2

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Zero-Order Correlations among Study Variables

TABLE 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Negative Dominant Expressivity (T1)	--														
2. Positive Expressivity (T1)	.24***	--													
3. Negative Submissive Expressivity (T1)	.66***	.25***	--												
4. Authoritative Parenting (T1)	-.03 (-.05)	.46*** (.42***)	.04 (-.05)	--											
5. Authoritarian Parenting (T1)	.35*** (.31***)	-.05 (-.06)	.25*** (.22***)	-.20*** (-.16**)	--										
6. Externalizing Problems (P-T1)	.37***	.20***	.30***	-.11* (-.11*)	.37*** (.36***)	--									
7. Externalizing Problems (T-T1)	.06	.03	-.01	-.01 (-.01)	.12* (.12*)	.22***	--								
8. Externalizing Problems (PE-T1)	.00	-.01	.03	-.08 (-.07)	.04 (.06)	.11*	.43***	--							
9. Social Competence (P-T1)	-.09	.13*	-.04	.32*** (.31***)	-.37*** (-.36***)	-.42***	-.23***	-.18**	--						
10. Social Competence (T-T1)	-.05	.05	.01	.06 (.06)	-.20*** (-.20***)	-.15**	-.39***	-.42***	.25***	--					
11. Social Competence (PE-T1)	.02	.13*	.04	.11* (.11*)	-.15** (-.15**)	-.06	-.13*	.01	.24***	.32***	--				
12. Externalizing Probs. (P-T2)	.19***	-.11*	.07	-.22*** (-.21***)	.26*** (.24**)	.29***	.32***	.26***	-.26***	-.30***	-.21***	--			
13. Externalizing Problems (T-T2)	.15**	-.02	.10	-.07 (-.05)	.16** (.15**)	.14**	.34***	.42***	-.05	-.33***	-.11*	.29***	--		
14. Externalizing Problems (C-T2)	.04	-.04	.00	-.13* (-.11*)	.14* (.11*)	.21***	.21***	.25***	-.18**	-.26***	-.18**	.46***	.17**	--	
15. Social Competence (P-T2)	-.08	.18**	-.03	.25*** (.24***)	-.27*** (-.27***)	-.29***	-.29***	-.30***	.45***	.37***	.31***	-.48***	-.21***	-.34***	--
16. Social Competence (T-T2)	-.13*	.01	-.15**	.12* (.12*)	-.14* (-.15**)	-.21***	-.31***	-.33***	.19***	.43***	.32***	-.31***	-.53***	-.21***	.31***

Notes. T1 = Time 1; T2 = Time 2; P = Parent Report; T = Teacher Report; C = Child Report, PE = Peer Report. For correlations between authoritative or authoritarian parenting and other variables, the correlations in the upper row were computed using the original parenting style scales, the correlations in the lower row (in parentheses) were computed using the shortened parenting style scales.

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