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Parent Emotion Talk with Preschoolers from Low-Income Mexican American and Chinese American Families: Links to Sociocultural Factors

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Abstract

Emotion talk (ET), an emotion socialization practice theorized to promote children's emotion understanding and emotion regulation, has been linked to better socioemotional adjustment in diverse samples. Immigrant children face developmentally unique challenges and opportunities related to their multi-lingual and multi-cultural experiences. The present study aimed to identify sociocultural correlates of parent ET in two groups of low-income immigrant families with preschool-age children: Mexican American (MA) and Chinese American (CA) families. In 90 parent-child dyads (child age = 38 to 70 months, 59% girls; 46 Mexican American and 44 Chinese American) recruited from Head Start programs, parents' (mostly mothers') ET quality and quantity (i.e., use of emotion words, emotion questions and explanations, and overall elaborateness of ET) were coded from verbal transcripts of a shared picture book reading task. First, we found similarities and differences in ET across the two groups. Both MA and CA parents used emotion words, emotion questions, and emotion reasoning, whereas linking the story to personal emotion experience was infrequent. MA parents used more negative emotion words, emotion reasoning, and engaged in more elaborate ET than CA parents. Second, we examined the unique relations of multiple socio-cultural factors (SES, cultural orientations, parent and child demographics) to parent ET. Parent education and child age were associated positively with emotion questions, income was associated positively with emotion reasoning, and parents' heritage culture orientation was associated positively with the elaborateness of ET. The findings highlight the need to consider socio-cultural variations in emotion socialization practices when adapting and disseminating socioemotional learning interventions.

Keywords

Emotion talk; Chinese American; Mexican American; children of immigrant families

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Introduction

One out of four children in the United States (25%, for a total of 18.4 million) grew up in immigrant families (with at least one foreign-born parent) (Hernandez & Napierala, 2013). Young children of immigrant families face developmentally unique challenges and opportunities related to their exposure to more than one language and culture (e.g., heritage and host cultures) and growing up with different norms and expectations for behaviors (Suárez-Orozco et al., 2018). Considerable heterogeneity has been observed in school readiness of immigrant children, with studies showing variations in the school readiness by generation status, regions of origin, socioeconomic (SES) factors, and preschool attendance (De Feyter & Winsler, 2009; Koury & Votruba-Drzal, 2014; Lee et al., 2018). Socioemotional competence is a key dimension of school readiness (Blair, 2002), and emotion talk (ET) - an emotion socialization practice - has been theorized to confer socioemotional benefits in early to middle childhood (Eisenberg et al., 1998; Lagattuta & Wellman, 2002). The present paper examined the frequency and content of parent emotion talk during shared book reading in two groups of low-income, immigrant families: Chinese American and Mexican American families. We further examined the unique links between multiple sociocultural factors (e.g., culture group, SES, and parent cultural orientations) and parent ET. The study can contribute to our knowledge on sociocultural diversity in emotion socialization and have implications for emotion-focused parenting interventions (e.g., Chan et al., 2021) and shared book reading interventions (Noble et al., 2019).

The Role of Emotion Talk in Socioemotional Development during the Preschool Period

Emotion talk is a type of emotion socialization, or parenting practices aimed at shaping children's experience, understanding, and regulation of emotions (Eisenberg et al., 1998). Emotion talk refers to verbal communications that address feeling states, including the quality of consciousness, sensations and physiological states, and emotion states (Dunn et al., 1991). Emotion talk is theorized to benefit children's socioemotional development through multiple mechanisms. First, from a social constructivist framework, ET or the broader category of mental state talk is theorized to promote children's understanding of mental states and emotions (e.g., LaBounty et al., 2008). Indeed, positive associations have been observed between parent mental state talk and children's emotion understanding in meta-analyses (e.g., Tompkins et al., 2018), which in turn facilitates positive social behaviors and peer relationships (Fabes et al., 2001; Izard et al., 2011). Second, by engaging in ET, parents can coach or model constructive emotion regulation for children (Morris et al., 2007). Consistent with this perspective, parent ET was associated positively with emotion regulation in school-age children (Curtis et al., 2020). Third, as theorized by Hoemann et al. (2019), caregivers' use of emotion words to label emotional events can promote children's emotion language and concept development, which in turn promotes their emotion understanding and emotion regulation. Consistent with this perspective, the size of preschoolers' emotion-specific vocabulary was associated uniquely with their knowledge of emotion regulation strategies after controlling for general expressive vocabulary (Streubel et al., 2020).

Emotion socialization is a bidirectional process in which parents adjust their emotion interactions and discussions according to their perceptions of children (Eisenberg et al., 1998). Pragmatic features of parent-child interactions, such as mother's use of repetitions and expansions, is determined largely by children's expressive language rather than the parent's (Whitehurst et al., 1988). How children experience and understand emotion is a continuous process and has long-term effects on their development (Brown & Dunn 1996; Fischer et al. 1990). Starting from age 3, children develop theory of mind, which allows them to interpret others' emotions as different from their own (Cole et al., 2010; Wellman et al. 2001). Parents also adjust their socialization strategies with their children by increasing frequencies in references to internal states between 33 months to 70 months (Brown & Dunn, 1991; Dunn & Brown, 1993; Kuebli et al., 1995; van der Pol et al., 2015). A longitudinal study found continuity in children's emotion knowledge from preschool to middle childhood, and mothers' explanations of others' emotions to their preschoolers were related positively to children's emotion knowledge in middle childhood (Garner, 1999). In support of the bidirectional relations, parents used more supportive verbal and non-verbal responses during emotion talk following children's emotion expression or emotion talk, whereas parents were more likely to react with denial, neglect, or criticism following children's disruptive emotion behaviors (Morelen & Suveg, 2012). Preschool children with low verbal comprehension are more likely to face unexplained demands for compliance from their mother, and accordingly, these children displayed fewer advanced emotion regulation strategies such as self-distraction or redefining the situation (Stansbury & Zimmermann, 1999). Similarly, mothers of children with low expressive and receptive language used fewer advanced emotion regulation strategies with their children (Stansbury & Zimmermann, 1999). In sum, the preschool years are a critical development period to examine variations in parent-child emotion talk and its sociocultural correlates, which provides a window to understand sociocultural contributors to school readiness.

Cultural Variations in Parent Emotion Talk

Although it is well-acknowledged that culture shapes emotion socialization, existing research on emotion socialization was conducted primarily with European/European American or White samples (Morelen & Thomassin, 2013; Raval & Walker, 2019). Because the adaptive functions of socialization practices depend on the cultural contexts, the optimal emotion socialization practice(s) identified in European/European American families may be less common in families from non-Western cultures (Morelen & Thomassin, 2013). Thus, there are doubts regarding the benefits of emotion socialization for children from non-Western cultures.

There are several hypothesized pathways through which cultural processes shape emotion talk. First, there are cultural variations in emotion-related values (Tsai et al., 2006), which can shape whether and how individuals use emotion talk to express and communicate emotion. Although both Chinese and Mexican cultures are considered collective cultures compared to the European/European American individualistic culture, they differ in specific emotion values. For example, *simpatía*, the Spanish term referring to feeling of sympathy, community, compassion toward others, represents a cultural script prevalent in the Latino society (Holloway et al., 2009; Triandis et al., 1984). *Simpatía*, based on the pursuit for

social harmony, encourages the individual to display a highly personable social environment and promotes generosity, personal charm, and hospitality (Sanchez-Burks et al., 2000). By contrast, the East Asian cultural values rooted in Confucius and Laozi's philosophy emphasize harmony and balance. According to these values, individual emotions can be ignored in the pursuit of group harmony, and self-restraint is considered a valuable individual trait (Soto et al., 2005). Consistent with these cultural perspectives, a study comparing emotion values of college students of Latino, Asian, and European heritage living in the U.S. found that individuals of European heritage perceived positive emotions as most desirable and appropriate in social interactions, followed by individuals of Latino heritage, and individuals of Asian heritage rated positive emotions as the least desirable to experience and appropriate to express (Senft et al., 2020). Moreover, individuals of Latino heritage rated negative emotions more undesirable compared to individuals of Asian heritage, but the two groups rated negative emotions similarly inappropriate to experience and express (Senft et al., 2020).

Cultural variations in emotion values can shape emotion socialization. Past cross-cultural research on parent-child ET typically compared non-Western families with European/European American families. For example, Wang (2001) found that when discussing shared emotional experiences, Chinese mother-child dyads displayed an "emotion-criticizing style" that focused more on teaching proper behaviors but provided few explanations for emotion itself. By contrast, European American mother-child dyads adopted a high-elaborative conversation style that involved more detailed discussions associated with the emotional events (Wang, 2001). A similar pattern of cultural difference was also found in content analyses of emotion-related cultural norms in popular American and Chinese storybooks (Ding et al., 2021). Specifically, American storybooks were more likely to present positive (vs. negative) emotions, negative powerful (vs. negative powerless) emotions, and supportive (vs. unsupportive and teaching) responses to negative emotions than Chinese storybooks (Ding et al., 2021). Luo et al. (2014) examined book-sharing interactions between mothers and their 4-year-old children from African American, Dominican, Mexican, and Chinese low-income U.S. families. They found that Chinese mothers were most likely to emphasize "negative consequences" of inappropriate behaviors and refer to emotions the least frequently among the four ethnic groups. These findings provided evidence that culture-based emotion values and norms are transmitted through emotion socialization practices such as shared book reading and emotion talk.

Only a few studies examined emotion talk in Mexican or Latino families. Eisenberg (1999) examined ethnicity (Mexican American vs. Anglo American), social class (working- vs. middle- class), and child gender differences in mother-child emotion talk during storybook and free play activities. Mixed results were found when comparing Mexican American with European American families: whereas Mexican American dyads talked less about the child's emotions and more about the mother's and others' emotions than did Anglo dyads, the two groups did not differ on talk about positive emotions (contrary to the hypothesis based on the Mexican value of *simpatía*). Another unexpected finding was that Mexican American dyads discussed the causal aspects of emotions less often than did European American dyads controlling for social class and gender differences (Eisenberg, 1999). In another study, Melzi et al. (2017) found that Latino mothers focused on establishing conversations with their

children in an elicitation task, whereas European American mothers prioritized the narrative goal on building the story rather than constructing a conversation (Melzi et al., 2017). This finding seemed consistent with Latino cultural emphasis on social relationships and Western cultural emphasis on individuality (Melzi et al., 2017).

An important limitation of past research on culture and emotion socialization is that researchers tended to compare non-Western families with Western families. There is limited research on cultural variations in ET between non-Western families from different cultural groups. Immigrant families from different heritage cultures who live in the same geographic region with similar sociocultural features (e.g., schools, neighborhoods, socioeconomic status) provide a unique opportunity to study cultural variations in ET. Because sociocultural factors such as ethnicity, language, culture groups, socioeconomic status, and immigration status tend to be interrelated, it is often difficult to separate cultural/language group-based differences in parenting from socio-economic status, immigration status, or geographic regions (e.g., rural vs. urban). However, by sampling immigrant groups with different cultural and language backgrounds (e.g., Chinese Americans and Mexican Americans) living in the same geographic region and who were matched on socioeconomic status, the present study aimed to obtain greater specificity regarding the roles of various socio-cultural factors in ET. Specifically, this study design allowed us to examine simultaneously the unique relations of multiple socio-cultural and demographic factors (parent acculturation, socioeconomic status, child age and sex, and parent figure) to variations in ET in immigrant families.

Parent Emotion Talk in Immigrant Families: Relations to Cultural Orientations and Other Socio-Cultural Factors

When studying variations in parent ET among immigrant families, it is important to consider the roles of cultural orientations. Cultural orientations refer to the degree to which immigrants are influenced by and actively engaged in the traditions, norms, and practices of a specific culture (Tsai & Chentsova-Dutton, 2002). Cultural orientations among immigrants have been conceptualized as a bi-dimensional process involving: a) acculturation/host culture orientation, or the process of adaptation to the host culture; and b) heritage culture orientation, or the process of adaptation to or maintenance of the immigrant's heritage culture (Gonzales et al., 2008). Previous research found differential associations between cultural orientations and ET in immigrant families. For example, in Chinese American immigrant mothers with school-age children, mothers' Chinese orientation was associated uniquely with their lower use of emotion questions and explanations and less elaborate ET (Tao et al., 2013). Although mothers' American orientation was correlated positively with amount of ET, it did not relate uniquely to ET controlling for Chinese orientation and other socio-cultural factors (Tao et al., 2013). Perez Rivera and Dunsmore (2011) examined the links of American acculturation and Latino enculturation to maternal emotion beliefs and mother-child ET among Latino American families with preschool-age children. Although cultural orientations did not correlate with mother-child ET, mothers' American acculturation was associated negatively with their belief that emotions can be dangerous, and the mothers with a stronger belief that emotions can be dangerous explained emotions less frequently to children. Cervantes (2002) examined intercultural variations in mother-

preschooler conversations in Mexican-descent families in the U.S. and found that Mexican immigrant mothers (those born in Mexico and moving to U.S. after age 12) used more explanations than labels. In contrast, Mexican American mothers born in the U.S. or born in Mexico but moved to the U.S. before age 10 used equal amounts of labels and explanations. The interpretation was that first-generation Mexican immigrant mothers' ET appeared linked more closely to the cultural practice of *dar consejos* (nurturing advice about the social world, Delgado-Gaitan, 1994), whereas second-generation or 1.5-generation Mexican American mothers' ET was more closely linked to the ET practice in U.S. preschools. Although Cervantes (2002) did not assess cultural orientations as continuous dimensions, the finding is consistent with the hypothesis that a stronger heritage culture orientation is associated with more ET practices consistent with the heritage culture, whereas a higher American orientation is associated with more ET practices encouraged in the mainstream American culture. Because Chinese and Mexican cultures differ in norms and values related to ET, Chinese American and Mexican American families sharing similar socioeconomic status and living in the same geographical region provide an excellent opportunity to "unpack" the effect of culture by testing the independent and unique relation of American and heritage culture orientations to ET.

Socioeconomic factors (parental education and income) have been linked consistently to ET in diverse samples. For example, a composite index of contextual risks capturing low family income, single-parent status, larger household size, and lower parental education level, was associated with mothers' less expressive encouragement and problem-focused responses toward children's negative emotions (Shaffer et al., 2012). Moreover, maternal education has been related negatively to display of unsupportive emotion reactions (Shaffer et al., 2012), and related positively with positive emotion words, emotion questions, and emotion explanations (Tao et al., 2013). Research on SES and language input at home generally has found that children in lower-SES families had lower exposure to child-directed speech or lower lexical and syntactic diversity of caregivers' speech compared to higher-SES families (see Pace et al., 2017 for a review). Mothers from higher-SES families used longer and more frequent utterances than mothers from middle- or lower-SES families (Hoff, 2003). Similarly, a composite family SES index was associated positively with both the quantity and quality of ET in Chinese American families (Curtis et al., 2020). Because family SES and cultural orientations are often correlated in immigrant families, testing their unique or nonoverlapping relations to ET can reveal the specificity of sociocultural processes shaping ET.

We also considered a few other demographic factors that have been related to ET in previous research: parent figure (mother vs. father), child sex and age. Mothers responded more positively to children's negative emotion expressions (Cassano et al. 2007) and use more emotion words than fathers (Fivush et al., 2000). Parental responses to children's expressed emotion varied by children's gender and age (Aznar & Tenenbaum, 2015; Cassano et al., 2007; Cervantes & Callanan, 1998). There are cultural variations in gender-specific family socialization practices (Melzi & Fernandez, 2004). For example, Peruvian mothers used more positive emotion words with sons than daughters, consistent with the cultural expectation that boys need to be assertive and obtain masculine features (Melzi &

Fernandez, 2004). This practice, in turn, provides boys with more opportunities to talk about positive emotions, which forms a cycle of gender socialization that is culturally specific.

The Present Study

Using verbal transcripts of parent-child conversations during a shared storybook reading task, the current study analyzed the content and quality of parent emotion talk with preschool-age children in low-income Mexican American and Chinese American families. The study had two aims. First, we examined descriptive characteristics of parent ET in the two groups. Specifically, we examined the mean frequencies of parent use of emotion words and emotion comments and overall quality/elaborateness of ET and compared cultural group differences in parent ET (Aim 1A). Based on previous cross-cultural research comparing these two groups (especially Luo et al., 2014), we expected MA parents to use more emotion words and have more elaborate emotion talk than CA parents. In addition, we reviewed the language samples of parent ET across the two groups and examined the overall patterns of parent ET content (Aim 1B). Second, we examined the unique associations of multiple socio-cultural factors (parent culture orientations, SES, parent figure, child age and sex) to ET (Aim 2). Based on prior research (Cervantes, 2002; Tao et al., 2013), we hypothesized that American orientation would be associated positively with the frequency and quality of parent ET. Because Mexican and Chinese cultures vary in values and norms on ET, we did not expect heritage cultural orientation to be associated with parent ET. Due to sample size limitation, the study is not powered to detect culture group \times cultural orientation interactions (Aiken & West, 1991).

Method

Participants

The sample consisted of 90 parent-child dyads from Mexican American ($N = 46$) and Chinese American ($N = 44$) families. The children (53 girls, 37 boys) were between 38 and 70 months of age ($M = 54.4$ months, $SD = 7.1$). Of the children, 17.8% were foreign-born (i.e., first generation), 76.7% were U.S. born and had at least one foreign-born parent (i.e., second-generation), and 5.6% were U.S. born and both parents were U.S.-born (i.e., third generation or above). Most participating parents were mothers (97.8%) and two were fathers (2.2%). The age of participating parents ranged from 21 to 46 years ($M = 34.6$, $SD = 6.4$). On average, the parents had lived in the U.S. for 9.0 years (range = 0 to 28 years, $SD = 6.3$). Most parents were married or living with a partner (91.1%). On average, the participating parents had 11 years of school education (range = 0 to 18 years, $SD = 3.8$). The spouses/partners of participating parents had an average of 8 years of school education (range = 0 to 16 years, $SD = 5.3$). Of the participating parents, 10% were employed full-time, 22% were employed part-time, 30% were homemakers, and 38% were unemployed or full-time students. Of the spouses/partners, 61% were employed full-time, 14% were employed part-time, 25% were employed. The average family per capita income in the past year was \$5,167 (range = \$1,000 to \$24,166, $SD = \$3,654$).

We compared MA and CA groups on demographic variables using independent sample t-tests (for continuous variables) and chi-square tests of independence (for categorical

variables). A few differences were found: compared to the MA participating parents, the CA participating parents were older (Cohen's $d = 1.27$) and had lived in the U.S. for fewer years (Cohen's $d = -1.16$), t s ($dfs = 87$ and 81) = 6.00 and -5.26 , p s $< .001$. Although the participating parents in the two groups did not differ in years of school education, the parents' spouses/partners in the MA group had lower education than the spouses/partners in the CA group (Cohen's $d = -0.59$), t ($df = 88$) = -2.8 , $p = .006$. Moreover, the child's generation status differed by culture groups: the CA group had more first-generation children and the MA group had more third-generation children, chi-square ($df = 2$) = 23.4 , $p < .001$. In addition, although not included in the present paper, prior analyses conducted using child vocabulary data from the present sample found that the MA and CA groups did not differ on objective measures of child English receptive and expressive vocabulary (Williams et al., 2019).

Procedure

The sample came from a larger cross-sectional study on language and socioemotional development of dual language learners in Head Start preschool programs in an urban metropolitan area in the U.S. (Williams et al., 2019). The participants were recruited from 15 Head Start preschool programs. Bilingual research assistants visited the sites and distributed project flyers to parents, where they collected parents' contact information and later contacted the parents to screen their eligibilities. The eligibility criteria were: (a) the child is between 36–71 months, (b) the child is enrolled at a Head Start for at least 3 days per week, (c) the child understands and speaks some English and Cantonese, Mandarin, or Spanish, and (d) both parents self-identify as ethnically Chinese or Mexican. Children who were diagnosed with a speech or language disorder or receiving speech or language services were excluded from the study.

The parent-child dyad completed a 2.5-hour assessment conducted either at participants' home or at university lab based on the parent's preference. Of the participating families, 32% chose a home assessment and 68% chose a lab assessment. The assessment procedures included child interview, language and emotion task, parent interview and questionnaires, and parent-child interactions. Parents completed the interviews and questionnaires in their preferred language (10% in English, 90% in Spanish/Cantonese/Mandarin). The present study used data collected from parent questionnaires (family demographics, parent cultural orientations) and parent-child shared storybook reading task. Parent-child interactions during the storybook task were video-recorded by trained interviewers, and the videos were transcribed by bilingual research assistants. The study protocol was approved by the Committee for Protection of Human Subjects (CPHS) of University of California Berkeley.

Measures

Family Demographics (Parent Report)—Parents were administered the adapted version of the Family and Demographics and Migration History Questionnaire (Roosa et al., 2008, also see Chen et al., 2014) by a bilingual interviewer. Items included child age and generation status, parent age and years living in the US, marital status, employment status and years of school education for both the participating parent and the spouse/partner, family income in the past year, and total number of adults and children living in the household.

Parents' Cultural Orientations (Parent Report)—Parents self-rated their cultural orientations using the Cultural and Social Acculturation Scale (CSAS; Chen & Lee, 1996). Affiliations to American and heritage culture are measured across domains, such as media use (e.g., “How often do you watch English/Spanish/Chinese movies?”), language proficiency (e.g., “How well do you speak in English/Spanish/Chinese?”), and interpersonal relationships (e.g., “How often do you invite Caucasian American/Latino/Chinese friends to your house?”). Parents rated the items on a scale from 1 to 5 (1= extremely poor/never to 5 = very good/often). The alpha reliabilities for American and heritage culture orientations were .87 and .73 in the MA group and .81 and .82 in the CA group.

Parent Emotion Talk (Observed)

Frog storytelling task.: We recorded parent-child book sharing interactions using a picture book with no words “Frog, where are you” (Mayer, 1969). The book consists of 29 black and white drawings about a little boy goes on a journey to look for his lost frog. Parents had 5 minutes to read the story with their child in their preferred language (English, Cantonese, Mandarin, or Spanish). The graphic presentations in the book call for different emotions, such as happiness, anger, fear, and sadness. In the process of storytelling, these pictures elicit emotion talk between parents and children. Shared book reading tasks are used widely in research investigating parent-child interaction (Garner et al., 1997; Landau et al., 2006), because they can elicit complex language from parents (Crain-Thoreson et al., 2001), including emotion talk. Danis et al. (2000) found that the type of talk engaged by adults during shared book reading has been linked to an increased chance for children to engage the same type of talk. Tao et al. (2013) used the frog book storytelling task to examine parent emotion talk in Chinese American families with school-age children. Furthermore, Huang and Kan (2021) used three picture book storytelling tasks to examine parent emotion talk in Cantonese-speaking Chinese American immigrant families with preschool-age children. They found that Chinese American parents' use of emotion words and emotion reasoning did not differ across the books.

Coding scheme.: The recordings of the Frog storytelling task were transcribed and scored using a coding manual initially adapted from Spinrad and Eisenberg (2010). The adapted coding theme has been validated in a previous sample of Chinese American families with school-age children (Tao et al., 2013). Two bilingual coders in Chinese and English were assigned to code the CA sample, and two bilingual coders in Spanish and English coded the MA sample. The two coders worked independently on each sample and had post-discussions to revolve the discrepancies. ET was measured in 3 components: number of emotion words, number of ET comments and questions, and overall elaborateness of ET. Interrater reliabilities, computed as intra-class correlations (ICCs) for the ET variables are: 0.93 for parent emotion words, 0.71 for parent emotion questions, 0.74 for parent emotion reasoning, and 0.62 for overall ET elaborateness. According to Koo and Li (2016), ICCs between 0.50 and 0.75 are considered moderate level of reliability and between 0.75 and 0.90 are considered good reliability. Therefore, the ET codes demonstrated moderate to good interrater reliabilities in the present sample. Although the parent ET and child ET variables were coded separately (i.e., parent emotion words, emotion comments and questions were counted separately from child emotion words, emotion comments, and questions), the

present paper only used parent ET variables because child ET variables had low frequencies and very little variability in the present sample.

Emotion words.: The coders counted the number of emotion words uttered by the parent during the book reading task. Emotion words included words that express affective states (e.g., “mad” 生氣/enojada, “unhappy” 不開心/infeliz, “afraid” 害怕/temerosa, etc...) and words that are related to emotional states without naming the specific emotion (e.g., “laugh”, “naughty”, “tired”, etc....) The counted emotion words were categorized into positive or negative valance.

Emotion talk comments and questions.: Three types of parent emotion comments or questions were categorized, and the frequencies of utterance were counted: linking, emotion questions, and emotion reasoning. Linking refers to parent linking the story to personal emotion experiences (e.g., “I told you, bees sting you because they get mad since the beehive is their home”). Emotion questions refers to parent raising questions regarding the character or the child’s emotional state (e.g., “Why is the boy mad”). Emotion reasoning refers to parent giving explanations to a character’s feeling (e.g., “The little boy is happy because he saw that the little frog is with its family”).

Global quality (elaborateness) of parent emotion talk.: The coders rated each parent on a global code of ET quality based on the parent’s storytelling behaviors throughout the whole task, using a 3-point scale (1= no ET present, 2= low quality of ET, 3= high quality of ET). Coders evaluated the quality of ET based on the elaborateness of ET (the levels of details and sophistication, the amount of information conveyed regarding emotions, and the degree of which parents engaged children in the discussion of emotions). Low quality of ET (a rating of 2) was represented by use of short statements and simple questions, such as “The boy is sad” and “Is the boy unhappy?”. High quality of ET (a rating of 3) was represented by the use of detailed explanations of emotions (e.g., “The boy got angry because the jar is broken, right?”), questions that elicits the child’s own thoughts (e.g., “What do you think he is feeling?”), and sentences that takes the perspective of the character (e.g., “The boy named Luis scolded the dog and told him that he needed to behave”). More language samples of ET selected from transcripts of MA and CA dyads in the present study can be found in Table 1.

Total utterances of parent-child dyad.: For each dyad, the coders counted the total number of parent utterances and child utterances (an utterance can include a main clause with an associated subordinate clause) for the whole book reading task for each dyad. Thus, the total utterance variable reflects the total amount of utterances by the parent-child dyad during the book reading task.

Results

Data analyses were conducted in the following steps. First, descriptive statistics, skewness, and kurtosis were computed for study variables and missing data analyses were reported. For Aim 1A, to test cultural group differences the frequency and quality of parent ET, we conducted independent-sample t-tests (for normally distributed ET variables) or nonparametric Mann-Whitney U tests for variables that did not meet the normality

assumption. For Aim 1B, we reviewed language samples and summarized the consistencies and differences in the content of parent ET across the two groups. For Aim 2, to examine the unique associations of socio-cultural factors to parent ET, we conducted a series of Poisson regressions (for count variables) predicting the frequency of parent emotion words and emotion comments simultaneously from culture group, SES, parent cultural orientations, and demographic variables. A multiple regression was conducted to predict the overall quality of parent ET from sociocultural factors. All analyses were performed in SPSS 27 (IBM Corp, 2020).

Aim 1. Descriptive and Qualitative Characteristics of Parent Emotion Talk

The descriptive statistics for parental ET for the full sample and by cultural groups are reported in Table 1. Based on the cutoffs of 2 and 7 for skewness and kurtosis respectively (West et al., 1995), the following variables were skewed and had high kurtoses (i.e., there were a concentration of cases with low scores and the data were heavily tailed): positive emotion words, linking, and emotion questions. For variables with non-normal distribution, nonparametric statistical analyses (Mann-Whitney U test and Poisson regression) were used. Emotion talk variables were missing for ten parent-child dyads due to technical issues with video/audio recording. We compared the dyads who had missing data on parent ET ($N = 10$) with those without missing data ($N = 80$) on parent and child demographic variables. No differences were found. Thus, data was considered missing at random. We also compared the dyads who completed the task at home ($N = 29$) with those who completed the task at the lab ($N = 61$) on parent ET variables using either Mann-Whitney U test or independent t-test. One significant difference also was found: the parents who did the assessment at the lab used more emotion reasoning than those parents who did the assessment at homes, Cohen's $d = 0.50$, $t(59) = 2.04$, $p = 0.045$.

To examine cultural group differences in the frequency and quality of ET, we used independent sample t-tests for normally distributed variables (negative emotion words, emotion reasoning, overall quality of ET, and total parent and child utterances) and Mann-Whitney U tests for non-normal variables (positive emotion words, emotion questions, and linking). Independent sample t-tests revealed three cultural group differences in parent ET. Compared to the CA parents, MA parents used more negative emotion words (Cohen's $d = 0.88$), $t(78) = 3.93$, $p < 0.001$, more emotion reasoning (Cohen's $d = 1.36$), $t(78) = 6.08$, $p < 0.001$, and displayed more elaborate emotion talk (Cohen's $d = 0.85$), $t(78) = 3.783$, $p < 0.001$. However, the two cultural groups did not differ in the amount of total parent and child utterances during the shared book reading task. The nonparametric Mann-Whitney U test revealed one cultural group difference: MA parents (mean rank = 43.63) used more linking than CA parents (mean rank = 37.04), $Z = -2.31$, $p = 0.021$. The two groups did not differ in the frequency of positive emotion words or emotion questions.

To help interpretation of the results of the quantitative analyses above, we reviewed the transcripts of MA dyads and CA dyads to identify consistencies and differences across the two groups. There were some similarities/consistencies in the content of parent ET between the two culture groups when reviewing transcripts qualitatively. In both groups, parents used more negative emotion words than positive emotion words during the task, and they used a

wider variety of different words to label negative emotions (e.g., “scared”, “sad”, “angry”, “yelling”, “annoying”) than positive emotions (e.g., “happy”, “like”, “love”). Moreover, linking (of story to personal emotion experiences) was rare in both groups: there were only a few occurrences of linking among MA parents, and only one occurrence of linking among CA parents.

Consistent with the cultural group differences in the frequency of negative words and emotion reasoning, and the overall quality (elaborateness) of ET reported in quantitative analyses above, we observed some differences in the storytelling styles between MA and CA groups. Specifically, CA parents often asked close-ended questions (e.g., “yes?”, “right?”) to elicit the child’s response. In contrast, MA parents tended to ask open-ended questions (e.g., the “wh” questions such as “when”, “where”, and “what”) to elicit the child’s responses. Additional post hoc quantitative analyses comparing the total number of Yes-No questions and total number of open-ended questions asked by parents between the two cultural groups provided partial support for this observation: compared to MA parents, CA parents ($M = 5.13$, $SD = 4.27$) asked more Yes-No questions than MA parents did ($M = 2.50$, $SD = 2.68$), independent-sample $t(df = 79) = 3.35$, $p < .001$, Cohen’s $d = 0.74$, although the two groups did not differ in the number of open-ended questions ($M_s = 13.23$ and 10.21 for CA and MA, $SD_s = 9.74$ and 7.96), $t(df = 79) = 1.53$, $p = .13$, Cohen’s $d = 0.34$. Therefore, differences in parents’ narrative styles might have partly contributed to cultural group differences in emotion talk.

Aim 2. Associations between Sociocultural Factors and Parent Emotion Talk

To examine the unique relations of multiple socio-cultural factors to parent ET, we conducted a series of Poisson regressions predicting the count variables of positive and negative emotion words, emotion questions and reasoning. Although we computed a Poisson regression to predict parent use of linking, the model did not converge likely due to large number of zero values on the linking variable. As reported in Table 3, the predictors included culture group, socioeconomic factors (parental education and income), parent cultural orientations, child age and sex, and parent figure (mother vs. father) and age. To control for the varying amounts of talking or length of storytelling, the total parent and child utterances was also included as a predictor. Based on the Omnibus Likelihood Ratio chi-square test, all four models fitted better than the intercept-only model, the chi-squares ($df = 11$) ranged from 32.81 to 133.00, $p_s < .001$. The parameter estimates are reported in Table 3. Culture group was a significant predictor of negative emotion words and emotion reasoning: compared to CA parents, MA parents used more negative emotion words and emotion reasoning. Child age was a significant predictor of emotion questions: parents of older children asked more emotion questions than parents of younger children. Parental education was a significant predictor of emotion questions: parents with a more highly educated spouse/partner asked more emotion questions than parents with a less educated spouse/partner. Income was a significant predictor of emotion reasoning: parents from families with higher income used more emotion reasoning than parents from lower-income families. In addition, the total amount of parent and child utterances was associated positively with the frequency of positive and negative emotion words and emotion questions. Parent American

and heritage culture orientations did not show unique relations to parent ET controlling for other sociocultural factors.

Finally, an ordinary least square (OLS) regression was computed to test the unique relations of sociocultural factors to the overall quality/elaborateness of parent ET. As shown in Table 4, culture group was a significant predictor of global ET quality: compared to the CA parents, the MA parents displayed more elaborate ET. Moreover, parents' heritage cultural orientation was related positively to ET quality: parents with a higher heritage culture orientation displayed more elaborate ET than those parents with a lower heritage culture orientation. Finally, the total amount of parent and child utterances was associated positively with the quality of ET.

Discussion

The present study examined the frequency and content of parent ET with preschool-age children during a shared picture book reading in two groups of low-income immigrant families: Mexican American and Chinese American families. The first aim was to characterize the frequency and content of parent ET and examine consistencies and differences in parent ET across the two culture groups. We found that both MA and CA parents used emotion words, emotion questions, and emotion reasoning during book reading, whereas linking the story to personal emotion experience was infrequent in both groups. A few group differences were found. MA parents used more negative emotion words, emotion reasoning, and engaged in more elaborate ET than CA parents. Culture group differences in parent ET remained significant after controlling for other sociocultural predictors. The second aim was to examine the unique relations of multiple sociocultural factors (family SES, parent cultural orientations, child age and sex, and parent age and parent figure). We found that parent education and child age were associated positively with emotion questions, income was associated positively with emotion reasoning, and parents' heritage culture orientation was associated positively the elaborateness of ET. The results highlighted the need to consider multiple sources of socio-cultural influences on emotion socialization practices in immigrant families.

The present study extended previous research (Huang & Kan, 2021; Tao et al., 2013) and provided further support for the use of shared picture book reading to examine emotion talk in immigrant families. Both MA and CA parents used emotion words to label emotions, asked questions about emotions, and made causal explanations about emotions. Similar to a study of Chinese American families with early elementary school age children (Tao et al., 2013), we observed very few occurrences of linking the story to child's personal emotion experience in this sample. Because we used a picture book developed based on the Western culture, it is possible that immigrant parents perceived the story character and his experience (a boy searching for his pet frog in the forest) to be too distal from their daily lives to make natural connections. Future research should also consider using picture books that are culturally salient for immigrant families to elicit a variety of emotion talk. Moreover, the finding that parents who were assessed in the lab used more emotion reasoning than those assessed at home suggests that the context of assessment can influence parents' emotion

socialization behavior. To enhance the generalizability of research findings to participants' daily lives, researchers should assess parenting practices in ecologically valid contexts.

Our finding on cultural group differences is somewhat consistent with previous research. It is important to note that previous cross-cultural research on ET has not compared Chinese-heritage families directly with Mexican-heritage families (except for Luo et al., 2014). When compared to European-heritage parents, Chinese-heritage parents engaged in less ET (Wang, 2001). The comparisons between European-heritage and Mexican-heritage parents on ET have not yielded consistent results. In the only study that included both Chinese-heritage and Mexican-heritage immigrant families in the U.S. (Luo et al., 2014), Chinese-heritage parents were less likely to mention "emotion" during shared storybook reading than Mexican-heritage parents. Thus, our finding that Chinese American parents used fewer negative emotion words and emotion reasoning and engaged in less elaborate ET than Mexican American parents is consistent with the finding from Luo et al. (2014), which also focused on low-income families. Because Luo et al. (2014) focused on parent-child interactions shaping children's narrative development and used a coding theme focusing on story component and dialogic emphasis of parent narratives, emotion talk was captured only by one code indicating the number of times parent described the protagonists' emotion (similar to our codes of emotion words). Using multiple codes to capture different components and feature of emotion talk, we replicated and expanded the finding of Luo et al. (2014). Because the culture group difference on ET remained significant after controlling for family SES (income and education), cultural orientations, and other common socio-cultural factors relevant to parenting in immigrant families, and the two cultural groups did not differ on the total amount of talking during the storybook task, it suggested that the group difference in ET behaviors between Mexican- and Chinese-heritage parents might be driven by culture-based values and norms on emotion or emotion expression. Moreover, our qualitative review of language samples indicated that there might be cultural group differences in parents' narrative styles (e.g., use of close-ended vs. open-ended questions), which might have contributed to the difference in global elaborateness of emotion talk.

Interestingly, the two culture groups did not differ on parents' use of positive emotion words, which is somewhat inconsistent with the hypothesis based on Mexican cultural valuing of positive emotion expressions (e.g., *simpatía*). A potential explanation is that the storybook used in the study (Frog, Where Are You? Mayer, 1969) contains more negative emotion scenarios (e.g., lost a pet frog, being chased by an owl) than positive emotion scenarios (e.g., found the frog and his whole family). Thus, the storybook task provided limited opportunity for parents to discuss positive emotions. Furthermore, we did not find significant child sex differences in ET, which is different from Melzi and Fernandez's (2004) finding that middle-class Peruvian mothers speak more positive emotion words to boys than to girls. Low-income Mexican and Chinese immigrant parents might have different socialization practices than middle-class Latino mothers related to their immigration experience. The individualistic American culture is less stereotypical in its view of gender role divisions (Fischer & Manstead, 2000), which might explain for the reduced sex differences in ET among immigrant parents who are becoming acculturated into the American culture. It is also possible that the single task of storybook reading used in the present study provided limited opportunities for parents to engage in a full range of emotion talk.

Our second aim was to examine the relations of multiple sociocultural factors to parent ET in immigrant families. Specifically, we examined two sets of socio-cultural factors: socioeconomic factors (parental education and income), and immigration-related factors (American and heritage culture orientations). We found that socio-cultural factors related differently to different dimensions of emotion talk. Different from previous findings that a higher American orientation was associated with greater use of emotion talk in Chinese and Latino immigrant families in the U.S. (Perez Rivera & Dunsmore, 2011; Tao et al., 2013), we found that parent American orientation was unrelated to parent ET after controlling for other sociocultural factors. Unexpectedly, we found one association between parent heritage cultural orientation and the overall quality (elaborateness) of ET: parents with higher heritage cultural orientation engaged in more elaborate ET than those with lower heritage culture orientation. A potential explanation for the discrepancy is that our study focused on low-income immigrant families whereas both Perez Rivera and Dunsmore (2011) and Tao et al. (2013) sampled immigrant families with mixed incomes (including both low- and middle-income families). It is possible that the benefit of heritage culture maintenance (in domains of language, media use, and social relationships) for parent-child relationship and parenting is more pronounced in low-income immigrant families due to their limited socioeconomic resources. A previous study based on the same sample as the present study found that parents' heritage cultural orientation was associated positively with children's heritage language proficiency (Chung et al., 2019). Thus, children's heritage language proficiency and shared parent-child language might a potential mechanism (Cox et al., 2021): because most parents in the present sample were heritage language speakers, those with higher heritage cultural orientation tended to have children with higher heritage language proficiency. Thus, the shared parent-child language allows parents to engage in more elaborate ET with children. Future research should consider parent and child language and conduct explicit tests of the above hypothesis.

Consistent with previous literature showing SES-related variations in parent-child narratives (see Pace et al., 2017 for a review), we found that parental education and family income were associated positively with parents' use of emotion questions and emotion reasoning. However, SES was unrelated to parents' use of emotion words and the overall elaborateness of ET. It is important to point out that because the study sampled low-income families (families in Head Start community), there is limited variance in SES indicators (income and parental education) in our sample, which might limit the study's statistical power to detect SES effects. On the other hand, using a socioeconomically homogenous sample allowed us to clarify the variations accounted for by culture-related factors (e.g., culture group and cultural orientation) which were often mixed in previous studies. Despite the scarcity of research on ET in low-income families, a few previous studies showed that low-income parents did engage in supportive emotion socialization practices (Brophy-Herb et al., 2011; Garner et al., 1994; Garner & Spears, 2000; Huang & Kan, 2021; Whiteside-Mansell et al., 2003). However, given there is much variability in emotion socialization in low-income households, the present finding suggested that SES-related variations in ET are more pronounced in parental use of complex ET strategies (e.g., engaging in children in ET by asking emotion-related questions, or making causal explanations about emotions).

Finally, we found only one significant relation between child age and ET: parents of older children asked more emotion-related questions than parents of younger children. Compared to younger children, parents have a higher expectation for older children to be engaged actively in storytelling and thus, they made more attempts to solicit the child's responses by asking questions. The lack of age-related variation in other ET variables is consistent with the finding by Kuersten-Hogan and McHale (2000), which showed stability of parent's emotion talk from children 30 months of age to 42–50 months of age. Another explanation is that the present study focused on between-person variations in child age and ET. Longitudinal studies with repeated measures of ET across development are better suited for examining age-related changes in ET.

Study Limitations, Implications, and Conclusion

The present study had several limitations. First, the study's small sample size limited the statistical power to detect both cultural group differences in ET and associations between ET and socio-cultural factors. A larger sample size also would afford more statistical power for testing culture group \times cultural orientation interaction effects. Second, although the shared picture book reading task has been used to elicit emotion talk in parent-child or teacher-child interactions (e.g., Bassett et al., 2020; Denham & Auerbach, 1995), it might not capture parent-child emotion talk in daily life. Moreover, because the storybook was developed in the Western culture, it does not capture culturally salient emotion experiences for immigrant families. Future research should examine ET in immigrant families using other tasks (e.g., parent-child conversations about personal emotion experience) or in other contexts (e.g., conflict discussion, dinner time conversations) to capture a variety of emotion conversations. Third, the ET coding theme was developed originally based on European American families and only capture explicit verbal references to emotions. Thus, the coding theme does not capture subtle references to emotions that are culturally salient to Chinese or Mexican cultures. Future research can use qualitative methods to identify culturally unique patterns of parent-child discourse related to emotions.

Fourth, our cultural orientation measure taps self-reported behavioral domains of acculturation (e.g., language use, media use, social relations, and celebration of festivals), but does not capture cultural values. Future research on emotion socialization in immigrant families should assess acculturation in the domain of emotion-specific cultural values and examine its link to ET. Fifth, the present study did not consider child characteristics that might shape parent-child emotion talk. Because emotion talk is an interactive process mutually shaped by the parent and the child, future studies should examine how child characteristics (e.g., language and cultural orientations, temperament) shape ET in immigrant families. Given most of our child participants were also dual language learners, identifying children's use of heritage and English language and parents' language abilities might provide further insight into children's socioemotional development in a culturally specific lens. Sixth, because the study sampled low-income immigrant families living in a culturally diverse metropolitan area, the findings may not generalize to immigrant families living in other sociocultural contexts. Furthermore, our sample consisted primarily of mothers. Given the critical roles of fathers in children's early language and socioemotional development, future research on emotion talk should also focus on fathers.

In summary, the study provided evidence for sociocultural variations in parent ET among low-income immigrant families. Shared book reading interventions have been used to promote children's language development (see Noble et al., 2019 for a review), and ET strategies can be incorporated into these interventions to promote children's emotion understanding. Our findings suggest that when delivering these interventions to immigrant families, researchers and educators need to consider cultural group, socioeconomic status, and acculturation factors that might impact families' acceptance of and engagement in such interventions. Thus, tailoring the interventions based on the sociocultural characteristics of families and children might be necessary to maximize their effectiveness in diverse populations.

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Table 1

Excerpts from Language Samples of Emotion Talk in Mexican American and Chinese American Parents

	Excerpts by Mexican American Parents	Excerpts by Chinese American Parents
Positive emotion words	<i>Mira aquí lo echó al agua y él se estaba riendo.</i> Look here he threw it into the water and he was laughing.	好多青蛙係咪呀? 哇, 跟住係咪搵到青蛙啦? 係, 係咪好開心呀? Lots of frogs, right? Wow, and then did they find the frog? Yes, are they very happy?
Negative emotion words	<i>Estaban molestas porque le dijo.</i> They were annoyed because he told her.	因為貓頭鷹害怕牠霸佔了它的洞嘅! Because the owl was scared that he would take his territory!
Linking of emotions to personal experiences	<i>cuando tumbas un panal y se caen las abejas te pican. de eso tienes que tener cuidado ¿ok? Mira, uh oh entonces te dije [inaudible] y te pican porque se enojan porque el panal es su casita.</i> When you knock over a beehive and the bees fall, they sting you. Of that you need to be careful, ok? Look, uh oh so I told you [inaudible] they sting you because they get mad because the beehive is their home.	對呀, 那如果你跌在窗戶上, 從窗戶上掉下來, 媽媽也會非常生氣的, 也會非常擔心的。這樣子很難過。 Correct, then if you lay on the window, and fall down from there, Mom will also be very angry, and will also be very worried. I would be very sad.
Emotion questions	como esta triste? como se pone triste? How is it sad? How does it get sad?	如果係你, 你驚唔驚呀? If it was you, would you be scared?
Emotion reasoning	<i>y sale un besito al niño porque el perrito estaba sufriendo con ese bote en la cabeza. pero el niño lo rescato y ahorita el perrito le dio un besito haci. [la mamá hace un sonido de beso.] le dio un besito porque el perrito se salvó.</i> And a little kiss came to the boy because the doggy was suffering with the container on his head. But the boy rescued him and now the doggy gave him a kiss like this. [mother made a kiss sound.] it gave him a kiss because the doggy was saved.	玩左一陣呢, 佢眼訓咗, 眼訓呢, 就上床訓覺啦, 同埋個狗仔一齊上床訓覺啦。點知呢, 個青蛙呢就跳左出來嗰。跳左出來呢, 佢一見到個 [inaudible], 青蛙跳左走左之後呢, 個狗仔好愕然啦! They played for a short while, and then they got sleepy. Then they went to bed, and the dog also followed him into the bed to sleep. Who knew the frog jumped out! He leaped out, and once they saw [inaudible], the frog continued to jump away from them, and that's why the dog was so surprised/ shocked!
Low quality (elaborateness) of emotion talk	<i>y el perro esta espantado. el niño se fija dentro del árbol si encuentra la rana pero no la mira. le sale un bicho. el niño se espanta y se cae.</i> And the dog is frightened. The boy looks inside the tree to see if he finds the frog but he doesn't see it. An owl comes out at him. The boy gets frightened and he falls.	跟住個小朋友又喺個門口嗰度出咗嚟, 攞住個汪汪, 個汪汪, 個汪汪點呀? 個汪汪錫佢啲係咪? 錫佢一啱。 Then the child went out the door, hugging the doggy. The doggy. How is the doggy? The doggy kisses him, right? He kisses him once.
High quality (elaborateness) emotion talk	Parent: <i>su pequeño perro se cayó, y Mateo estaba muy asustado porque se cayó pero fue y lo levantó muy rápido. el perrito se puso que muy feliz o muy triste.</i> his little dog fell and Mateo was very frightened because it fell but he went and picked it up very fast. The doggy got very happy or very sad Child: <i>muy feliz.</i> Child: very happy. Parent: <i>muy feliz.</i> Parent: Very happy. Child: <i>y el?</i> Child: and him? Parent: <i>y él también se puso muy feliz.</i> Parent: And he also became very happy. Child: <i>no.</i> Child: no. Parent: <i>estaba preocupado porque dijo estás bien, te lastimaste.</i> Parent: He was worried because he said you're okay, I hurt you.	Parent: 噃, 鬧佢係咪呀? 佢個鼻哥仔呀係咪呀? Parent: Yes, they were scolding him right? He bit his nose right? Child: 點解呀? Child: Why? Parent: 你嘈嘈喎, 咬你鼻哥仔咁係咪呀? 噃? 係咪咁樣呀? Parent: You are being so noisy, so I will bite your nose, yes? Hmm? like this right? Child: 係。 Child: Yes.

Table 2
Descriptive Statistics of Parent Emotion Talk Variables for the Full Sample and by Cultural Groups

Variables	Full Sample (N =80)				Mexican American Group (N =42)		Chinese American Group (N =38)	
	M	SD	Minimum	Maximum	M	SD	M	SD
Positive emotion words	1.91	2.19	0	12	2.19	2.29	1.61	2.07
Negative emotion words	7.82***	4.74	0	23	9.93	5.64	5.50	4.26
Overall quality of emotion talk	2.63***	0.56	1	3	2.83	0.44	2.39	0.60
Linking	0.15*	0.06	0	4	0.26	0.70	0.03	0.16
Emotion questions	1.44	1.88	0	10	1.21	1.52	1.68	2.21
Emotion reasoning	1.79***	1.82	0	7	2.76	1.76	0.71	1.16
Total parent and child utterances	114.75	33.95	0	193	110.29	25.99	119.56	40.65

Notes. Variables with star(s) indicate significant cultural group differences in means based on independent-sample t-tests or Mann-Whitney U tests.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3
 Poisson Regressions Predicting Parent Use of Emotion Words, Emotion Reasoning, and Emotion Questions from Sociocultural Factors

Predictors	DV: Positive emotion words			DV: Negative emotion words			DV: Emotion questions			DV: Emotion reasoning		
	B (Robust SE)	p	B (Robust SE)	B (Robust SE)	p	B (Robust SE)	B (Robust SE)	p	B (Robust SE)	B (Robust SE)	p	
Culture group (being Mexican American)	0.66 (0.36)	0.066	0.70 (0.166)	< .001	-0.30 (0.33)	0.365	1.46 (0.28)	< 0.001				
Child sex (being girls)	-0.37 (0.27)	0.167	0.08 (0.161)	0.606	0.05 (0.27)	0.854	-0.04 (0.26)	0.867				
Child age	0.02 (0.02)	0.364	0.01 (0.01)	0.205	0.05 (0.02)	0.004	-0.02 (0.02)	0.130				
Parent figure (being mothers)	0.51 (0.91)	0.572	-0.14 (0.16)	0.404	0.48 (0.51)	0.35	-0.38 (0.31)	0.216				
Parent age	0.05 (0.03)	0.052	0.01 (0.02)	0.561	0.01 (0.02)	0.79	0.01 (0.02)	0.622				
Participating parent education	0.05 (0.03)	0.175	-0.03 (0.02)	0.163	-0.02 (0.04)	0.672	-0.03 (0.04)	0.432				
Nonparticipating parent education	0.05 (0.03)	0.145	0.02 (0.02)	0.164	0.09 (0.04)	0.015	0.01 (0.02)	0.681				
Per capita income	3.58E-5 (4.43E-5)	0.419	1.24E-5 (1.09E-5)	0.253	2.57E-5 (3.42E-5)	0.451	3.86E-5 (1.46E-5)	0.008				
Total parent and child utterances	0.01 (0.003)	0.021	0.01 (0.002)	< .001	0.02 (0.004)	< 0.001	0.01 (0.004)	0.094				
American culture orientation	-0.43 (0.23)	0.063	0.02 (0.12)	0.891	-0.20 (0.22)	0.359	0.18 (0.22)	0.406				
Heritage culture orientation	0.09 (0.23)	0.714	0.01 (0.14)	0.972	-0.07 (0.22)	0.761	-0.08 (0.19)	0.676				

Notes. DV = dependent variable, B = regression coefficient, Robust SE = robust standard error of regression coefficient, p = p value of Wald chi-square test.

Table 4
Multiple Regression Predicting Overall Quality of Parent Emotion Talk from Sociocultural Factors

Predictors	DV: Overall quality of parent emotion talk		
	B (SE)	Beta	p
Culture group (0 = CA, 1 = MA)	0.42 (0.15)	0.37	0.008
Child gender (0 = girls, 1 = boys)	-0.013 (0.12)	-0.01	0.915
Child age	-0.01 (0.01)	-0.07	0.508
Parent figure (0 = moms, 1 = dads)	-0.10 (0.36)	-0.03	0.791
Parent age	0.004 (0.01)	0.05	0.698
Participating parent education	-0.01 (0.02)	-0.07	0.566
Nonparticipating parent education	-0.01 (0.01)	-0.01	0.942
Per capita income	-1.33E-5 (0.00)	-0.08	0.466
Total parent and child utterances	0.01 (0.002)	0.40	< .001
Heritage culture orientation	0.25 (0.12)	0.24	0.041
American culture orientation	0.16 (0.11)	0.17	0.164
Adjusted R ² = 0.253			

Notes. DV = dependent variable, MA = Mexican American group, CA = Chinese American group, B = unstandardized regression coefficient, SE = standard error of regression coefficient, Beta = standardized regression coefficient, p = p value for t-test of regression coefficient.