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Parent–Child Acculturation, Parenting, and Adolescent Depressive Symptoms in Chinese Immigrant Families

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Abstract

Using a sample of 388 father–adolescent and 399 mother–adolescent dyads in Chinese immigrant families, the current investigation tested Portes and Rumbaut's (1996) assertion that generational dissonance may indicate a family context that places children at increased risk for adverse outcomes. Study findings suggest that a high discrepancy in father–adolescent acculturation levels relates significantly to more adolescent depressive symptoms. The study further demonstrates that the quality of the parenting relationship between fathers and adolescents operates as a mediator between father–adolescent acculturation discrepancy and adolescent depressive symptoms. Specifically, a high level of discrepancy in American orientation between fathers and adolescents is associated with unsupportive parenting practices, which, in turn, are linked to more adolescent depressive symptoms. These relationships are significant even after controlling for the influence of family socioeconomic status and parents' and adolescents' sense of discrimination within the larger society.

Keywords

acculturation; parenting; Chinese; adolescence; depressive symptoms

Children of immigrants constitute one of the fastest growing segments of the school-aged population in the United States (Hernandez, 2004). Children of immigrants are especially prevalent in the metropolitan areas of California, where over half the school-aged children have at least one immigrant parent (Jensen & Chitose, 1996). As 75% of today's immigrants are from Asian and Latin American countries, their children constitute the majority of non-European, non-English speaking school-aged students in the United States (Suarez-Orozco, 2001). Scholars and policy-makers alike are concerned about understanding how these children adjust to their receiving country.

Acculturation is one of the most widely studied constructs in understanding immigrant adjustment. *Acculturation* refers to the process of adopting the language, attitudes, culture, and behaviors of the new host country (Zane & Mak, 2003). Traditionally, acculturation theories have been developed and tested for adult immigrants (Coll & Magnuson, 1997). It is important to move beyond these models because today's immigrants typically migrate as a family unit, with children playing a notable role in the resettlement process of immigrant families (Valenzuela, 1999).

Emerging studies on the children of immigrants have tended to view their acculturation process as individualistic, rather than as a process that is linked to the lives of other family members (e.g., Nguyen, Messe, & Stollak, 1999). It is important to consider the role of parents' acculturation in children's adjustment, as children are embedded within an important developmental context: the family. Within this developmental context, parents represent a powerful socializing agent for their children (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Darling & Steinberg, 1993). The current study investigates how children's and parents' acculturation levels together have an influence on the adjustment of children, especially on adolescent depressive symptoms.

Chinese Americans, the largest Asian heritage group in the United States (Barnes & Bennett, 2002), are the focus of this study. Previous studies have demonstrated that Asian children in the United States report higher levels of depressive symptoms than both White and other minority adolescents (Bankston & Zhou, 2002). At the same time, Asian students may be less likely to receive services for emotional problems because they are perceived as model minorities (D. F. Chang & Sue, 2003). To date, studies on the relationship between acculturation and depressive symptoms in Chinese Americans yielded inconsistent findings on whether acculturation provides an advantage or a disadvantage in terms of mental health. This may be because acculturation has so often been studied at the individual level. Measuring acculturation within the family context (i.e., focusing on consonance or dissonance between parents and children) may establish a more consistent relationship to depressive symptoms because the family represents an influential and proximal context of development for adolescents.

Portes and Rumbaut (1996) provided a framework for organizing parent-child acculturation levels in immigrant families. When the level of acculturation is similar for parents and children, there is "generational consonance" within the family. On the other hand, dissimilar levels of acculturation among family members can result in "generational dissonance." They suggested that generational dissonance may represent a family context that places children at increased risk for poor outcomes. It may be that when adolescents and parents are divergent in their cultural practices and cultural values, adolescents are less likely to turn to their parents for guidance through difficulties. They are particularly unlikely to consult with their parents about how to function within the dominant culture. This can create a sense of helplessness and hopelessness, both of which are symptoms of depressed mood. It has also been proposed that parents from generationally dissonant families may be more inclined to use unsupportive parenting techniques because of the lack of shared understanding between parents and children, which in turn may increase the likelihood of poor outcomes for the children (Weaver & Kim, 2008).

Dissonant Family Context and Child Maladjustment

Complementing Portes and Rumbaut's (1996) assertion that children from dissonant families have poorer economic prospects than do children from generationally consonant families, a number of studies have pointed to a relationship between generationally dissonant families and

a wide range of problem behaviors in children, such as substance use in Latino children (Felix-Ortiz, Fernandez, & Newcomb, 1998; Szapocznik, Kurtines, & Fernandez, 1980).

There is evidence that the research findings on children of Latino immigrants may extend to children of Asian immigrants and to adjustment indicators other than substance use. A study of Asian Indian families indicated that when adolescents and parents experience a mismatch in acculturation styles, adolescents displayed lower self-esteem and higher social anxiety (Farver, Narang, & Bhadha, 2002). Studies on Chinese immigrants also indicate that generational dissonance may be related to more depressive symptoms in children (Costigan & Dokis, 2006).

A limitation of the studies reviewed above is that they often rely on student reports to determine generational dissonance. Rather than relying on students' reports, it is important to obtain acculturation scores from both parents and children to categorize families into generationally dissonant or consonant contexts (Birman, 2006). The current study uses this more rigorous approach to assess acculturation levels of both parents and children to determine whether generational dissonance, or a high level of parent-child acculturation discrepancy, is associated with more depressive symptoms among Chinese American adolescents.

This study adopts a bidimensional framework of acculturation (Nguyen et al., 1999) by assessing orientation toward both cultures, Chinese and American. It is important to examine American and Chinese orientations together in the same study because contemporary research on acculturation suggests that the bidimensional framework of acculturation (which examines the influence of one's heritage orientation in conjunction with one's American orientation) not only provides a better understanding of the phenomenon, but also better captures the essence of the acculturation process. In addition, the present study moves beyond proxy measures of acculturation, such as language use or the language-based acculturation measures of past studies (e.g., Tardiff & Geva, 2006) by using a broader behavioral acculturation measure. *Behavioral acculturation* refers to engaging in behaviors that represent the cultural practices or traditions of one's host and heritage cultures. Language-based acculturation measures, on the other hand, assess how often a person engages in behaviors that are solely language based (e.g., reads and/or listens to Chinese/American media). Although behavioral acculturation includes language-based behavior, it also extends to nonverbal behavioral characteristics.

In summary, the current study tests whether both Chinese and American parent-child acculturation levels relate to adolescent depressive symptoms in similar ways, and whether one orientation emerges as significant after controlling for the other type. This information could be useful in designing intervention programs because it allows for a focus on the type of cultural orientation that is most related to adverse outcomes in children.

Generational Dissonance, Parenting, and Adolescent Outcomes

Generational dissonance appears to be a risk factor for declines in the quality of the parent-child relationship (Birman, 2006; Farver, Narang, et al., 2002; Tardiff & Geva, 2006). Empirical studies do indeed indicate that there are increased tensions between parents and children in the dissonant family context. Farver, Narang, et al. (2002) noted that adolescents from generationally dissonant families reported more frequent and more intense family conflict. Using adolescents' reports, Tseng and Fuligni (2000) indicated that families in which adolescents and parents use the same language (both use English or both use a heritage language) displayed high levels of family cohesion. On the other hand, families in which parents and adolescents use a mixture of English and a heritage language to communicate with one another have lower levels of family cohesion. Based on such findings, it is possible to surmise that the parent-child relationship within the generationally consonant family context is likely to be more supportive than within the dissonant family context.

These past studies rarely have considered the mechanisms that may mediate the effect of acculturation discrepancy on adolescent outcomes. One possible mediator may be parenting. In a mediation model proposed by Dumka and his colleagues (Dumka, Roosa, & Jackson, 1997), acculturation levels of mothers related to inconsistent parenting practices, which in turn affected adolescent adjustment. Dumka et al. focused on mothers' acculturation levels only, but it is plausible that parent-child acculturation levels would also relate to fathers' parenting practices. Moreover, it is important to test how additional dimensions of parenting, such as warmth, monitoring, and inductive reasoning, relate to parent-child acculturation.

In studies involving Asian Americans, there are inconsistent patterns in the relationship between parenting styles and adolescent outcomes (Kim & Wong, 2002). The inconsistencies may be due to the way in which parenting styles are conceptualized. Because authoritative/authoritarian parenting styles are a composite of several parenting techniques (Maccoby & Martin, 1983), it is difficult to tease out which factors are related to adolescent adjustment and which are not. A clearer understanding of the relationship between parenting styles and child outcomes in Asian American families would therefore require a separate examination of each of the various dimensions of parenting. This study examines three parenting dimensions for mothers and fathers: affective parenting (warmth), behavioral parenting (monitoring), and communicative parenting (inductive reasoning).

When parents and children are dissimilar in their American and Asian orientations, the likelihood of shared understanding decreases, diminishing the number of warm exchanges between them. A negative affect in the parent-child relationship may spill over to other parenting dimensions. Parents who do not enjoy a warm relationship with their children are less active in monitoring them, and thus are less likely to know their children's whereabouts and those with whom their children interact. These more distant parents are also less likely to use inductive reasoning, such as giving reasons for their decisions and explaining rules to their adolescents when disciplining them. Studies show that lower levels of warmth, monitoring, and inductive reasoning are related to more adjustment problems among adolescents (Ge, Conger, Lorenz, & Simons, 1994; Patterson & Stouthamer-Loeber, 1984). Adolescents who perceive less warmth from their parents may experience an increase in their sense of helplessness. Likewise, when parents do not actively monitor their adolescents, these children may experience increased feelings of parental irresponsibility and a sense of hopelessness. In addition, parents who do not use explanations and reasoning techniques may exacerbate an adolescent's sense of uncertainty and frustration, important components of depressed mood (Kim & Ge, 2000).

Although past studies typically average the responses of mothers and fathers, it is important to distinguish between the responses of mothers versus those of fathers (Birman, 2006; Farver, Narang et al., 2002). On migration, Asian women typically gain more economic independence, whereas the opposite is true for men in Asian immigrant households (Espiritu, 1999). The traditional patriarchal role of fathers as breadwinners is therefore more difficult to achieve after migration (Pessar, 2003), suggesting that the traditional role of fathers as disciplinarians may also undergo alterations in immigrant households.

According to Portes and Rumbaut (1996), lower socioeconomic status (SES) and a higher sense of discrimination are characteristics of generationally dissonant families; it is thus important to control for these constructs in the analyses. Adolescents whose parents are higher in SES show fewer mental health problems (Steinberg, Mounts, Lamborn, & Dornbusch, 1991) than those from families with lower SES. Experience of discrimination also has been related to elevated levels of depressive symptoms among children of immigrants (Rumbaut, 1994). The current study uses both of these constructs—SES and discrimination—as well as adolescent

age, adolescent sex, and parents' length of stay in the United States as covariates in testing the study hypotheses.

Present Study

The present investigation examines three sets of hypotheses, tested separately for mother–adolescent and father–adolescent dyads in Chinese immigrant families. First, it is hypothesized that a dissonant family context, in which there is a high discrepancy in parent–child acculturation levels, will be related to depressive symptoms in adolescents. Second, it is hypothesized that high discrepancies in American and Chinese orientations between parents and children will be associated with lower quality in the parent–child relationship, as assessed by affective (e.g., parental warmth) as well as behavioral (e.g., monitoring) and communicative (e.g., inductive reasoning) parenting. Third, it is hypothesized that unsupportive parenting practices (lower levels of warmth, monitoring, and inductive reasoning) will result in more depressive symptoms for adolescents.

Method

Participants

From a larger study of 444 Chinese American families, the current study uses a sample of 388 father–adolescent dyads with foreign-born fathers, and 399 mother–adolescent dyads with foreign-born mothers. Because prominent immigrant scholars define immigrant families as those in which a parent is foreign-born, with either a U.S.- or foreign-born child (Hernandez, 2004), the same sample selection criteria are used for the current study. That is, all of the current analyses represent only those adolescents with at least one foreign-born parent. Slightly over half of the adolescent sample is female ($n = 226$, 55%). The age of the adolescents ranges from 12 to 15 ($M = 13$, $SD = 0.73$). Family income, on average, is in the range of \$30,001 to \$45,000. Parents, on average, have some high school education (less than high school: 41% of fathers and 34% of mothers; completed high school: 28% of fathers and 39% of mothers; more than high school: 31% of fathers and 27% of mothers). Most of the participants originally came from Hong Kong or southern provinces of China. Fewer than 10 families hail from Taiwan. The occupational status of immigrant parents is wide ranging, from those in professional occupations (e.g., banker or computer programmer) to unskilled laborers (e.g. construction worker or janitor). The majority speaks Cantonese; less than 10% of the families speak Mandarin as their home language.

Procedure

Participants were recruited from seven middle schools in major metropolitan areas of Northern California. With the aid of school administrators, Chinese American students were identified, and all eligible families were sent a letter describing the research project. Participants received a packet of questionnaires for the mother, father, and target adolescent in the household. Participants were instructed to complete the questionnaires alone and not to discuss answers with friends and/or family members. They were also instructed to seal their questionnaires in the provided envelopes immediately following completion of their responses. Within approximately 2 to 3 weeks after sending the questionnaire packet, research assistants visited each school to collect the completed questionnaires during the students' lunch periods. Target adolescents who returned family questionnaires were compensated a nominal amount of money for their participation. Of the 47% of families who agreed to participate, 76% returned surveys.

Questionnaires were prepared in English and Chinese. The questionnaires were first translated to Chinese and then back-translated to English. Any inconsistencies with the original English version scale were resolved by bilingual/bicultural research assistants with careful

consideration of culturally appropriate meanings of items. In the present study sample, around 70% of parents used the Chinese language version of the questionnaire (70% for fathers and 72% for mothers), and the majority (84%) of adolescents used the English version.

Measures

Acculturation—The Vancouver Index of Acculturation (VIA) follows the bidimensional model of acculturation and was developed for use with Chinese Americans (Ryder, Alden, & Paulhus, 2000). Using a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), mothers, fathers, and adolescents in each family responded to 10 questions about their American orientation and 10 questions about their Chinese orientation. Example items are, “I often follow Chinese cultural traditions,” “I am willing to marry a Chinese person,” “I enjoy Chinese entertainment,” and “I am interested in having Chinese friends.” The American orientation items are the same as the Chinese orientation items, except that the word *Chinese* is changed to *American*. An average of the items was used, and the acculturation scale score was computed separately for American and Chinese orientations, for each informant in the study. Not all 20 items were used in the present investigation because results of the factor analyses demonstrated that some of the items did not conform to the theoretical basis of the acculturation measure (see Results section). Such items were removed before calculating the scores for American and Chinese orientations. The internal consistency for the acculturation items used in the study was high for the study sample (Chinese orientation, $\alpha = .78$ to $.81$; American orientation, $\alpha = .78$ to $.80$).

Parenting—Parenting was assessed through measures adapted from the Iowa Youth and Families Project (Conger, Patterson, & Ge, 1995; Ge, Best, Conger, & Simons, 1996). An affective dimension of parenting, parental warmth, was rated by adolescents, fathers, and mothers using a scale ranging from 1 (*never*) to 7 (*always*). Items for parental warmth (e.g., being understanding, listening carefully, or helping the adolescent) showed high internal consistency across informants ($\alpha = .91$ to $.92$, for children's reports of mothers' and fathers' warmth; $\alpha = .88$ to $.89$, for mothers' and fathers' reported warmth, respectively).

Using a scale ranging from 1 (*never*) to 5 (*always*), adolescents, fathers, and mothers also rated items measuring communicative and behavioral dimensions of parenting: inductive reasoning (e.g., give reasons for decisions, explain rules; $\alpha = .75$ to $.79$ for children's reports of mothers' and fathers' inductive reasoning; $\alpha = .73$ to $.74$, for mothers' and fathers' reported inductive reasoning, respectively) and monitoring (e.g., know whereabouts of adolescent, whom adolescent is with, whether adolescent complied with set bedtime; $\alpha = .67$ to $.79$ for children's reports of mothers' and fathers' monitoring; $\alpha = .78$ to $.76$ for mothers' and fathers' reported monitoring, respectively). A measurement model presented by Kim and Ge (2000) showed that these two dimensions loaded adequately to a latent construct of parenting practices for Chinese Americans.

Adolescent depressive symptoms—Adolescents completed the widely used Center for Epidemiologic Studies of Depression Scale (CES-D; Radloff, 1977), a reliable scale for use with diverse samples (Radloff, 1991). Using a scale ranging from 0 (*rarely or none of the time*) to 3 (*most or all of the time*), adolescents answered 20 questions about their depressed mood ($\alpha = .87$). As recommended by Radloff (1991), the composite CES-D score was calculated only for adolescents who had no more than five missing items on the scale, with only one adolescent not meeting this criterion (with seven missing items). There was sufficient variability in the CES-D measure ($M = 12.91$, $SD = 8.29$; scores ranged from 0 to 53).

There are a variety of recommendations in the literature on cutoff scores to determine significant levels of depressive symptoms/clinical levels of depression. Using the cutoff value

of 16, as recommended by Roberts, Andrews, Lewinsohn, and Hops (1990) and Radloff (1991), the prevalence rates for the present sample of males, females, and all adolescents are 30.1%, 33.3%, and 31.9%, respectively. This compares to prevalence rates of 53.02% in Roberts et al. and 49.48% in Radloff (1991) for all adolescents; thus, our sample appears to have lower prevalence rates for significant levels of depressive symptoms. Given that depressive symptoms are related to internalizing problems, the results are not inconsistent with the literature on low internalizing scores for Chinese American children (Chang, Morrissey, & Koplewicz, 1995).

Using the recommended cutoff values of 22 for male and 24 for female to represent clinical (American Psychiatric Association, 2000, Diagnostic and Statistical Manual of Mental Disorders defined) cases of depression in adolescents for the CES-D (Perreira, Deeb-Sossa, Harris, & Bollen, 2005; Roberts, Lewinsohn, & Seeley, 1991), the prevalence rates for male, female, and all adolescents in the current study sample are 10.8%, 11.6%, and 11.2%, respectively. Unfortunately, neither Roberts et al. (1991) nor Perreira et al. provided prevalence rates for their samples, which means it is not possible to compare their results with those from the present study sample.

Discrimination—Experience of discrimination was measured by a scale developed by Kessler and colleagues (Kessler, Mickelson, & Williams, 1999). Using a scale ranging from 1 (*often*) to 4 (*never*), respondents rated nine statements, such as “I am treated with less courtesy than other people.” To better reflect the discriminatory experiences of Chinese Americans, one additional item was added: “People assume my English is poor.” The ten items assessing self-reports of discrimination showed high internal consistency ($\alpha = .85, .87$, and $.85$ for adolescents, fathers, and mothers, respectively).

SES—Fathers and mothers answered questions on family income before taxes and highest level of education attained. Family income was assessed in \$15,000 increments using a 12-point scale ranging from 1 (*below \$15,000*) to 12 (*\$165,001 or more*). The highest level of education completed by parents was assessed using a 9-point scale ranging from 1 (*no formal schooling*) to 9 (finished graduate degree [medical, law, Master's degree, etc.]).

Mother's and father's length of stay in the United States—Length of stay in the United States was calculated by taking the difference of the year the mother or father arrived in the United States and the date the survey was completed. On average, the father's length of stay in the United States was 18.34 years ($SD = 10.22$), and the mother's length of stay in the United States was 16.26 years ($SD = 8.18$).

Conceptualization of Parent–Child Acculturation Discrepancy

The acculturation scores were first standardized separately for mother, father, and child as suggested by De Los Reyes and Kazdin (2004), so that the resulting acculturation score for each informant has the same mean of 0 and the same standard deviation of 1. Otherwise, the informant with a larger variance on the acculturation score can artificially inflate the resulting discrepancy score. For each informant in the study, acculturation levels in both the Chinese and American orientations were designated as *low*, *medium*, or *high* if the standardized score was in the lowest third, middle third, or highest third, respectively. In reviewing the literature, it appeared that it was common to assign acculturation scores relative to the study's specific sample rather than to the entire population (e.g., Farver, Bhadha, & Narang, 2002), mainly because population estimates of acculturation are unknown.

The designations for adolescents and parents were then cross-classified to determine parent–child acculturation discrepancy levels in both Chinese and American orientations for each dyad

(mother–adolescent and father–adolescent) within each family. When the orientation scores were similar between parents and adolescents, their discrepancy score was categorized as low (e.g., low for both parent and adolescent). It was categorized as medium for a moderate amount of acculturation discrepancy (e.g., low for parent and medium for adolescent). It was categorized as high for a large amount of acculturation discrepancy (e.g., low for parent and high for adolescent).

Examining the relative position of the standardized acculturation scores in creating cross-classifications suggests that the discrepancy scores are based on the relative acculturation level of the informant, better recognizing students' sense/perception of their own acculturation level relative to their peers in the same context, and mother's/father's perceptions of their acculturation relative to their counterparts/peers.

Although some scholars have argued in favor of considering the direction of the discrepancy between parents and children (i.e., whether the acculturation discrepancy is attributed to the parent's or the child's higher score), Birman (2006) found that acculturation discrepancies between parents and adolescents are linked to family disagreements regardless of the direction of the differences. Analyses of the present study's data demonstrate that whether the discrepancy is attributable to higher scores for the adolescent or for his/her parents, there are no significant differences in parenting practices or adolescent depressive symptoms; this is true for each type of acculturation discrepancy between adolescents and parents. Therefore, the present study's approach of using cross-classification to determine adolescent–parent acculturation dissonance scores based on acculturation classification differences (i.e., low, middle, high) between parent and adolescent appears to be justified.

Results

Factor Analyses of Acculturation Measures

The VIA (Ryder et al., 2000) was validated on Chinese and East Asian undergraduate college students, whereas the present study sampled a wider age range of Chinese parents and their adolescent children. Exploratory factor analysis of VIA was conducted using Mplus 5.2 (Muthén & Muthén, 1998–2007) by combining adolescents and their parents to determine whether latent factors underlying the acculturation measure would be replicated in the current sample. Floyd and Widaman (1995) recommended checking for at least a moderate level of correlation at the 0.20 level or above among the items on a scale before proceeding to exploratory factor analysis. Otherwise, items not meeting the criteria will perform poorly in factor analysis. Across informants, it appeared that Items 2, 5, and 7 were problematic. These items were therefore dropped, and the factor analysis was performed on the remaining 17 items.

Two factors were extracted via the varimax rotation method, which assumes that the factors to be extracted are orthogonal and unrelated. An orthogonal rotation method such as the varimax was preferred because Ryder et al. (2000) asserted that the VIA consists of two uncorrelated subscales (i.e., Chinese and American). Across informants, however, four items (Items 3, 14, 16, 19) loaded on both the Chinese and the American orientations. Because such cross loadings are inconsistent with the theoretical basis of the scale, these items were not considered for use in the study. The remaining items loaded on the same factors found by Ryder et al., with factor loadings ranging from .39 to .76.

Results of confirmatory factor analysis found that the two-factor model provided an adequate fit for the data, $\chi^2(58, N = 1,236) = 198.363$, $p < .001$, comparative fit index (CFI) = .955, root-mean-square error of approximation (RMSEA) = .047, standardized-root-mean square residual (SRMR) = .056. All factor loadings were significant, ranging from .40 to .75.

Acculturation Discrepancy

Based on the revised acculturation measure, adolescents' responses on the American orientation subscale were cross classified with parents' responses to arrive at four acculturation discrepancy scores (father–adolescent and mother–adolescent American orientation discrepancy; father–adolescent and mother–adolescent Chinese orientation discrepancy). In general, it appears that most parent–child dyads were between low (30 to 40%) and medium (29 to 41%) in their level of acculturation discrepancy, and only a small percentage of the sample demonstrated a high level of acculturation discrepancy (13 to 19%).

Structural Model Linking Acculturation Discrepancy, Parenting, and Adolescent Depressive Symptoms

Structural equation modeling tested the hypotheses that (a) acculturation discrepancy is associated with parenting practices, (b) parenting practices are associated with adolescent depressive symptoms, and (c) parenting practices mediate the association between acculturation discrepancy and adolescent depressive symptoms. As recommended by MacKinnon (2008), the covariates (adolescent age, sex, family SES, parents' length of stay in the United States, perceived discrimination by adolescents and their parents) were controlled for only on the endogenous variables (parenting and depressive symptoms) and not on the exogenous variables in the structural models.

All of the analyses for the structural models were conducted using Mplus 5.2 (Muthén & Muthén, 1998–2007). Because 8% of the data was missing for the 388 father–adolescent dyads, and 5% of the data was missing for the 399 mother–adolescent dyads due to nonresponse, the structural models were analyzed using the full information maximum likelihood (FIML) method, which applies the expectation maximization algorithm described by Little and Rubin (1987). FIML allows the use of all available data; therefore, the sample size is 388 for each of the tested father–adolescent model and 399 for each of the tested mother–adolescent model. The resulting standardized coefficients for the tested models are provided in Figures 1 and 2. In these models, the coefficients at the top refer to relationships between fathers and adolescents, whereas the coefficients at the bottom refer to relationships between mothers and adolescents. The model fit was good to excellent for all of the models tested; detailed fit statistics are reported in the figure captions.

Figure 1 displays a structural model in which parenting style is indicated by adolescent report of inductive reasoning and monitoring. According to the structural model, when parents and children are more discrepant in their Chinese orientation (β s = $-.15$ and $-.19$, $ps = .020$ and $.003$, for adolescent–father and adolescent–mother discrepancies, respectively) and when fathers and adolescents are more discrepant in their American orientation ($\beta = -.14$, $p = .029$), adolescents reported fewer supportive parenting practices, including the use of fewer inductive reasoning techniques and fewer monitoring activities by parents. Adolescents' reports of unsupportive parenting are related, in turn, to more adolescent depressive symptoms (β s = $-.30$ and $-.35$, $ps < .001$, for fathers' and mothers' parenting, respectively).

Figure 2 presents the structural model for adolescents' reports on parental warmth. American and Chinese orientation discrepancies between parents and children are related to adolescents' reports of more parental warmth (β s = $-.12$ and $-.13$, $ps = .016$ and $.018$, for the paths between American/Chinese orientation discrepancy and paternal warmth, respectively; $\beta = -.13$, and $p = .007$, for the path between Chinese orientation discrepancy and maternal warmth). Adolescents' reports of parental warmth are related, in turn, to fewer depressive symptoms (β s = $-.22$, $ps < .001$, for both fathers' and mothers' parenting).

As the structural models presented in Figures 1 and 2 used only adolescents' reports of parenting, the models were tested again, but with two sources (i.e., both adolescents' and parents' reports) for each parenting construct. The first step in testing these structural models was to demonstrate adequate factor loadings (above .30, Crocker & Algina, 1986) of the parenting measurement models, as indicated by adolescent and parent reports of the same parenting behaviors. For inductive reasoning, the factor loadings appeared adequate across parent and adolescent reports (.33 for both fathers and mothers, versus .72 and .98 for adolescent's reports of fathers' and mothers' inductive reasoning). For monitoring, the measurement model showed high factor loadings across parents' and adolescents' reports (.50 for fathers and .45 for mothers, versus .56 and .60 for adolescent's reports of fathers' and mothers' monitoring). However, for parental warmth, the factor loadings were inadequate for parents' reports of warmth (.16 for fathers and .21 for mothers, versus .92 and 1.12 for adolescent's reports of fathers' and mothers' warmth). Therefore, the structural models using two sources of reports for the parenting construct were tested only for inductive reasoning and monitoring, but not for parental warmth.

The fit of the structural models for two sources of reports for inductive reasoning was good: $\chi^2(19, N = 388) = 37.844, p = .006, CFI = .937, RMSEA = .051, SRMR = .033$, for father–adolescent model; and $\chi^2(19, N = 399) = 27.032, p = .104, CFI = .976, RMSEA = .033, SRMR = .028$, for mother–adolescent model; for monitoring, it was $\chi^2(19, N = 388) = 35.808, p = .011, CFI = .946, RMSEA = .048, SRMR = .030$, for father–adolescent model; and $\chi^2(19, N = 388) = 36.797, p = .008, CFI = .946, RMSEA = .048, SRMR = .031$, for mother–adolescent model. The models demonstrated that when fathers and adolescents are more discrepant in their American orientation ($\beta = -.18, p = .020$) and when parents and their adolescents are more discrepant in their Chinese orientation ($\beta_s = -.19$ and $-.12, p_s = .009$ and $.036$, for adolescent–father and adolescent–mother discrepancies, respectively), parents use less inductive reasoning, and adolescents report more depressive symptoms ($\beta_s = -.28$ and $-.17, p_s < .001$ and $.015$, for fathers' and mothers' inductive reasoning, respectively). Also, when parents and children are more discrepant in their Chinese orientation, parents are less active in monitoring their adolescents ($\beta_s = -.14$ and $-.17, p_s = .049$ and $.017$, for fathers and mothers, respectively), which is related to more adolescent depressive symptoms ($\beta_s = -.43$ and $-.40, p_s < .001$, for fathers' and mothers' monitoring, respectively).

Mediation Tests

According to Baron and Kenny (1986), to test for mediation, a significant bivariate relationship between the acculturation level of dyads and adolescent adjustment must be established. The only bivariate relationship that met the criteria was the relationship between father–adolescent American orientation discrepancy and adolescent depressive symptoms. Tests of significant mediation/indirect effect were conducted using the program PRODCLIN, which implements the asymmetric distribution of products method described by MacKinnon, Fritz, Williams, and Lockwood (2007). This method is preferred because it is more powerful and provides more accurate confidence intervals than the traditional Sobel's test for indirect effects (MacKinnon, 2008; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Essentially, the asymmetric distribution of products method uses an asymmetric confidence interval to demonstrate that an indirect/mediation effect is significantly different from zero.

In Figure 3, the significant bivariate relationship between father–adolescent American orientation discrepancy and adolescent depressive symptoms ($\beta = 0.10, p = .04$, shown in dotted line) is reduced to nonsignificance ($\beta = .01, p = .87$, shown in solid line) when adolescents' reports on fathers' behavioral parenting (monitoring and inductive reasoning) are included in the structural model. This indirect effect of father–adolescent American orientation discrepancy on adolescent depressive symptoms, through adolescent report of fathers'

behavioral parenting, is significant. Specifically, the indirect effect's lower and upper bounds of the 95% confidence interval are 0.097 and 0.871; because the confidence interval does not include zero, it is consistent with a statistically significant mediation effect.

Similarly, in Figure 4, the significant bivariate relationship between father–adolescent American orientation discrepancy and adolescent depressive symptoms ($\beta = 0.10, p = .04$, shown in dotted line) is reduced to nonsignificance ($\beta = .024, p = .604$, shown in solid line) when adolescents' reports of fathers' warmth are included in the structural model. This indirect effect of father–adolescent American orientation discrepancy on adolescent depressive symptoms, through adolescent report of father's warmth, is significant (lower and upper bounds for the 95% confidence interval are 0.094 and 0.925, respectively).

Mediation tests were also conducted for models involving two sources of reports (i.e., both adolescents' and parents' reports) of parenting: specifically, for monitoring and inductive reasoning. The indirect effect of father–adolescent American orientation discrepancy on adolescent depressive symptoms is significant for father's inductive reasoning (lower and upper bounds for the 95% confidence interval are 0.269 and 2.389, respectively), but not significant for father's monitoring (the path from father–adolescent American orientation discrepancy to father monitoring was not significant, $\beta = -.13, p = .119$).

These results suggest that higher levels of father–adolescent American orientation discrepancy relate to more adolescent depressive symptoms because of lower levels of warmth (child report only), less monitoring (child report only) and less inductive reasoning (child and father report) from fathers.

Discussion

This study provides some support for the proposed theoretical model of parent–child acculturation, parenting, and adolescent adjustment. The findings extend Portes and Rumbaut's (1996) theory in that generational dissonance or high parent–child acculturation discrepancy, is not limited to economic prospects, but may also relate to adolescent adjustment problems in other domains, particularly depressive symptoms. By testing an integrated model, the present study demonstrates that paternal parenting (especially adolescent perceptions of paternal parenting) mediates the relationship between father–adolescent acculturation discrepancy and adolescent depressive symptoms. The findings hold, even after controlling for the influence of socioeconomic status and adolescents' and parents' sense of discrimination, parents' length of stay in the United States, and adolescent age and sex.

Farver and colleagues (Farver, Bhadha, et al., 2002; Farver, Narang, et al., 2002) reported that when parents and children are mismatched in their acculturation styles, the quality of the parent–child relationship is lower. They also reported that adolescents' social anxiety tends to be higher and that their self-esteem tends to be lower. Such findings demonstrate the role acculturation discrepancy plays in parent–child relationship quality and adolescent outcomes. This study examined these three constructs together in the same model to develop an understanding of how each may influence the other. The current study tested a process model of these constructs, demonstrating that acculturation discrepancy is indirectly related to adolescent depressive symptoms via unsupportive parenting practices. That is, a high discrepancy in acculturation levels is associated with unsupportive parenting practices, which in turn result in more adolescent depressive symptoms. The present study also demonstrates that the similarities in the relationships across study constructs for both parenting affect and parenting behaviors suggest that it may not be entirely inappropriate to use the parenting styles construct with Asian Americans, especially for adolescent reports of parenting.

Studies have found that the acculturation gap between adolescents and parents is related to family processes, specifically family conflict (Birman, 2006; Farver, Narang, et al., 2002). The current study extends those findings to multiple dimensions of parenting, as acculturation discrepancy is related to parental warmth, monitoring, and inductive reasoning. This finding is important because, unlike family conflict, parenting practices have been identified as modifiable mediators in prevention research that seeks to impact child outcomes (Formoso, Gonzales, & Aiken, 2000). Thus, although past studies have concentrated heavily on family conflict, it may be more important to focus on parenting: in the effort to improve adolescent mental health, parenting is much more amenable to intervention than is family conflict.

The present study also shows that acculturation discrepancy in both American and Chinese orientations relates in similar ways to measures of the parent–child relationship. These findings corroborate what was reported by Tseng and Fuligni (2000), who demonstrated that family cohesion relates in similar ways to the use of the same language, whether this is the heritage language or English, between parents and children. As such, our findings, derived from multiple dimensions of parenting, indicate that family processes are impacted negatively by either American or Chinese acculturation discrepancy between adolescents and parents. Parenting functions as a mediator, however, for only the father–adolescent American orientation discrepancy and adolescent depressive symptoms.

It is worth noting that the present study identified parent–adolescent dyads in which the adolescent is either more Chinese oriented or less American oriented than their parents. In their sample of Mexican American families, Lau et al. (2005) demonstrated that adolescents who unexpectedly showed lower levels of acculturation or were more aligned with the traditional/heritage culture than their parents experienced more conduct problems than those adolescents whose acculturation levels matched that of their parents. Moreover, according to Birman's (2006) study of Soviet families in the United States, the discrepancy between parents and adolescents was linked to family disagreements regardless of the direction of the difference (i.e., whether the discrepancy is attributed to the parent's or the child's higher score). The results of our study appear to confirm Birman's (2006) and Lau et al.'s findings with a different sample of Chinese immigrant families.

The findings also demonstrate that examination of parent–child acculturation does indeed constitute an appropriate unit of analysis, providing assurance that researchers may move beyond a focus on individual-level acculturation. In fact, recognizing the mutual influence of parent and adolescent acculturation can create a more comprehensive framework for understanding the acculturation process of immigrant families. When the behavioral acculturation measure shows a similar factor structure across informants, it becomes more appropriate for use in creating a discrepancy score.

The current investigation is one of the few to include multiple informants in a study of immigrant adjustment. Previous research examining acculturation discrepancy between parents and children has paid little attention to the sex of the parent. That is, previous studies examining acculturation discrepancy between parents and children (e.g., Birman, 2006; Tseng & Fuligni, 2000) almost have never distinguished between the acculturation discrepancy of father–adolescent and mother–adolescent dyads within the family. Before the current study, it was unclear whether acculturation discrepancy between adolescents and mothers would produce similar results as acculturation discrepancy between adolescents and fathers. Although mother–adolescent and father–adolescent acculturation discrepancy produced similar results, it was only the father–adolescent acculturation discrepancy that showed a significant relationship for parenting as a mediator in the proposed model. Thus, generational dissonance in American orientation between adolescents and fathers may be the most likely factor related to deleterious outcomes in children through less positive parenting behaviors and parenting

affect. Although mothers are traditionally viewed as the nurturers of Asian families (Kim & Wong, 2002), it appears that fathers play a notable role in the emotional well-being of children of immigrants. In other words, future interventions should aim to involve fathers, as they have an important part to play in improving the mental health of Chinese American adolescents.

The current investigation contributes to the literature by demonstrating a culture-specific process of adolescent adjustment that is salient in Chinese immigrant families. According to the findings, it appears that in families with high levels of acculturation discrepancy, the divergence of values between parents and children can frustrate the parent-child relationship. Those adolescents who report a lack of supportive parenting are more likely to experience depressive symptoms because they may feel an increased sense of helplessness. When such discrepancies exist in Chinese American families, children report that their parents are less warm, less diligent in monitoring, and use fewer inductive reasoning techniques, all of which relate to more depressive symptoms in these adolescent children.

Limitations

A limitation of the current study is the cross-sectional study design, which hinders the ability to test with confidence alternative directions of influence in the study constructs. For example, it is possible that adolescents who show more depressive symptoms may have distorted perceptions of parenting, so that they report parenting practices to be more negative than is warranted. It would be desirable to test this alternative hypothesis in future studies with longitudinal data. Although adolescents' depressive symptoms may result in their being less objective, Kim and Ge (2000) demonstrated that children's reports of parenting may be the antecedent link to their depressive symptoms. In addition, an alternate pathway to test in a future study is whether parenting practices may lead to more acculturation discrepancy.

The present study relies on the informant's acculturation level relative to his or her peers to create the discrepancy score. This approach is different from that of considering only the raw difference of dyads, and a future study can compare different approaches in demonstrating the generalizability of the current findings.

The current study's findings are stronger with respect to adolescent reports of parenting as compared to those involving a latent construct of both parent and adolescent reports of parenting. However, a growing number of studies have suggested the importance of linking child reports of parenting to their depressive symptoms, arguing that it is children's awareness and appraisal of parenting behaviors that best explains their depressive symptoms (Shelton & Harold, 2008).

Although touted as model minorities, Chinese American adolescents are not immune to the negative consequences of generational dissonance on their mental health. According to the study findings, intervention programs should aim not only at decreasing the level of acculturation discrepancy between parents and children, but also at increasing parents' use of supportive parenting practices to improve the mental health of Chinese American children in the United States.

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Figure 1.

Structural model for parent–child acculturation, behavioral/communicative parenting, and depressive symptoms. All coefficients are standardized ($n = 388$ for father–adolescent model and $n = 399$ for mother–adolescent model) and based on the full information maximum likelihood procedure using the maximum likelihood estimator. Estimates on top correspond to the relationship coefficients for father–adolescent model, and estimates on the bottom correspond to relationship coefficients for mother–adolescent model. For father–adolescent model: $\chi^2(19, N = 388) = 27.914, p = .09, CFI = .978, RMSEA = .035, SRMR = .025$. For mother–adolescent model: $\chi^2(19, N = 399) = 14.743, p = .739, CFI = 1.000, RMSEA = .000, SRMR = .016$. SES = socioeconomic status. $^\dagger p < .10$. $*p < .05$.

Figure 2.

Structural model for parent–child acculturation, parental warmth, and depressive symptoms. All coefficients are standardized ($n = 388$ for father–adolescent model and $n = 399$ for mother–adolescent model) and based on the full information maximum likelihood procedure using the maximum likelihood estimator. Estimates on top correspond to the relationship coefficients for father–adolescent model, and estimates on the bottom correspond to relationship coefficients for mother–adolescent model. For father–adolescent model: $\chi^2(10, N = 388) = 18.063, p = .054, CFI = .973, RMSEA = .046, SRMR = .025$. For mother–adolescent model: $\chi^2(10, N = 399) = 4.428, p = .926, CFI = 1.000, RMSEA = 0.000, SRMR = .011$. SES = socioeconomic status. $^\dagger p < .10$. $^* p < .05$.

Figure 3.

Mediation model for inductive reasoning and monitoring. $\chi^2(15, N = 388) = 23.120, p = .082$, CFI = .980, RMSEA = 0.037, SRMR = .026. SES = socioeconomic status. * $p < .05$.

Figure 4. Mediation model for parental warmth. $\chi^2(7, N = 388) = 14.209, p = .048$, CFI = .975, RMSEA = 0.052, SRMR = .025. * $p < .05$.