



Published in final edited form as:

J Youth Adolesc. 2009 May ; 38(5): 691–702. doi:10.1007/s10964-008-9275-x.

The Influence of Maternal Acculturation, Neighborhood Disadvantage, and Parenting on Chinese American Adolescents' Conduct Problems: Testing the Segmented Assimilation Hypothesis

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Abstract

Associations among neighborhood disadvantage, maternal acculturation, parenting and conduct problems were investigated in a sample of 444 Chinese American adolescents. Adolescents (54% female, 46% male) ranged from 12 to 15 years of age (mean age = 13.0 years). Multilevel modeling was employed to test the hypothesis that the association between maternal acculturation and adolescents' conduct problems could be explained by differences in mothers' reliance on monitoring and harsh discipline. In addition, guided by segmented assimilation theory, measures of neighborhood disadvantage were expected not only to be related to differences in parenting, but also to moderate the effects of maternal acculturation on parenting. Results indicated that increased maternal acculturation was related to higher levels of maternal monitoring and lower levels of harsh discipline, which, in turn, were related to lower levels of adolescents' conduct problems. Hierarchical linear modeling results revealed that neighborhood disadvantage was related to lower levels of maternal monitoring. However, neighborhood disadvantage did not moderate the link between maternal acculturation and parenting practices.

Keywords

Chinese American; Conduct problems; Parenting; Acculturation; Neighborhood disadvantage

Introduction

Attitudes and beliefs about parenting are multifaceted and influenced by many factors, including one's culture of origin (Bornstein et al. 1998). A growing immigrant population from varying heritage backgrounds in the United States has spurred interest in cultural variation in parenting norms and practices. While some scholars have suggested that parenting cognitions and behaviors derived from one's native culture may be highly resistant to change (LeVine 1988; Ngo and Malz 1998), others suggest that parenting practices can change as acculturating parents adopt attitudes, beliefs, and behaviors endemic in the new host culture. Emerging research provides some evidence that acculturation to mainstream American culture may indeed stimulate changes in childrearing among immigrant parents (Dumka et al. 1997; Farver and Lee 2000; Bornstein and Cote 2004).

Changes in parenting practices among immigrants have important implications because of the well-documented effects of parenting on children's adjustment. Extensive research suggests that two sets of parenting practices, monitoring and harsh discipline, are strongly associated with youths' conduct problems and antisocial behavior (Loeber and Dishion 1983; Patterson and Stouthamer-Loeber 1984; Snyder and Patterson 1987; Gershoff 2002). Monitoring is broadly defined as "a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities and adaptations" (Dishion and McMahon 1998). Harsh discipline is often operationalized as pertaining only to physical punishment, but may include other forms of discipline that are considered unpleasant, coercive, stern, or demeaning (Rothbaum and Weisz 1994; Baumrind 1997). Higher levels of monitoring and lower levels of harsh discipline have each been found to decrease risk of youths' conduct problems, aggression, and hostility (e.g., Patterson and Stouthamer-Loeber 1984; Weiss et al. 1992; Rothbaum and Weisz 1994). While established primarily with predominantly European American samples, the relationships between parental monitoring, harsh discipline, and youths' conduct problems have been replicated among ethnic minority families (Brody et al. 2003; Hill et al. 2003).

Given the established link between parenting practices and children's conduct problems, and emerging evidence of acculturation-related changes in parenting, it stands to reason that parental acculturation may be associated with youths' conduct problems as parenting practices change in the host culture. Links between maternal acculturation and youths' antisocial behaviors have been reported (Eamon and Mulder 2005), and investigators have speculated that this relationship might be mediated by differences in maternal parenting practices. For example, Samaniego and Gonzales (1999) reported that increased risk of delinquency among highly acculturated Mexican American adolescents was mediated by their mothers' reliance on inconsistent discipline and lack of monitoring practices. This result was consistent with previous findings that acculturated Mexican American youths reported that their mothers engage in less monitoring and involvement in academics compared to their recently immigrated and less acculturated counterparts (Fridrich and Flannery 1995; Dinh et al. 2002). However, only the youths' acculturation levels were assessed in these studies. Investigators have inferred that more acculturated youths have more acculturated parents for whom protective parenting practices erode as support for enacting traditional family practices diminishes, thereby resulting in higher levels of conduct problems in youths (Samaniego and Gonzales 1999).

Further complicating our understanding of the acculturation of parenting, the extant research offers contradictory results indicating that there is a positive association between parental acculturation and protective parenting practices. Surveys of Mexican American mothers indicate that higher levels of maternal acculturation are associated with lower levels of inconsistent discipline, rejection, and hostile control of children (Knight et al. 1994; Dumka et al. 1997; Hill et al. 2003). Kim et al. (2006) also found that Korean American mothers who

reported higher levels of rejection of American culture tended to report higher levels of maternal rejection and hostility. Dumka et al. (1997) suggest that when mothers have more interaction with the majority culture they become increasingly aware of negative socialization forces and accordingly mobilize more protective and effective discipline. Additionally, the research on acculturation and parenting has also produced null findings. For example, Gonzales et al. (2006) found that family acculturation (based on both maternal and adolescents' acculturation) was not related to maternal parenting practices. Hence, continued research is needed to clarify such inconsistencies on the association between maternal acculturation and parenting.

These inconsistencies may be attributable to methodological differences in examining parents' versus youths' reports of acculturation and parenting. Inconsistencies may also be partly due to different aspects of parenting measured across studies, including inconsistent discipline, hostile control, monitoring, and involvement; although these parenting strategies tend to be highly correlated (e.g., Ge et al. 1996b; Kim and Ge 2000). Further still, it may be possible that the effects of parental acculturation on parenting and children's behavioral outcomes are variable depending on other circumstances. An exclusive focus on parental acculturation may overlook the contributions of the broader social context. Research has identified neighborhood factors that shape both parenting and children's developmental outcomes. Neighborhoods with socio-economically disadvantaged residents, absence of a middle-class, and social disorganization have higher levels of antisocial behavior and delinquency among youth (Seidman et al. 1998). Neighborhood disadvantage (defined by high levels of unemployment, poverty, receipt of public assistance, female headed households, and low per capita income) is related to less maternal affection (Klebanov et al. 1994), increased affiliation with deviant peers (Brody et al. 2001), and increased rates of delinquency in adolescents (Peebles and Loeber 1994). In addition, parents in disadvantaged neighborhoods have lower perceptions of parental efficacy which are, in turn, related to less parental involvement and monitoring (Shumow and Lomax 2002). These findings held after accounting for family education, income, and children's age and gender. The stress encountered in disadvantaged social contexts may lead to difficulty managing limited resources, energy, and time, diminishing capacity to parent effectively.

There is evidence that there is some interaction between neighborhood factors and family cultural factors in relating to parenting practices. For instance, the link between neighborhood disadvantage and parenting appears to depend on family characteristics such as parental acculturation. Earls et al. (1994) reported that perceptions of danger in the neighborhood appeared to amplify use of harsh discipline among US born ethnic minority parents but not among recent immigrant parents. Immigrant parents with low levels of acculturation may have had little exposure to models of harsh parenting common in the neighborhood, as communication and interactions with neighborhood families may be limited by language barriers or lack of social integration.

The idea that neighborhood context may influence the outcomes of acculturation is also suggested by segmented assimilation theory (Portes and Rumbaut 1990; Zhou 1997), which proposes that the outcomes of immigrants adapting to American life largely depend on the segment of the society and environment to which they are adapting. For immigrant parents,

“becoming American may not always be an advantage for themselves nor for their children. When immigrants enter middle-class communities, it may be advantageous for them to acculturate and assimilate. When they enter the bottom of the hierarchy of social inequality, the forces of assimilation come mainly from the underprivileged segments of this structure.” (Zhou 1997, p. 999)

Segmented assimilation theory essentially proposes that acculturation may lead to both positive and negative outcomes, depending on the context to which one adapts.

Acculturation within disadvantaged environments may therefore be more likely to have poorer outcomes than acculturation in relatively advantaged environments. Parenting may become compromised with increasing acculturation in disadvantaged neighborhoods, as practices of more harsh discipline and less monitoring may be adopted. While several studies have demonstrated that neighborhood disadvantage can impact both children's behavioral outcomes and parenting (e.g., Klebanov et al. 1994; Shumow and Lomax 2002), to our knowledge, studies have not examined possible interactions between parental acculturation and the local socioeconomic context.

Moreover, because the majority of studies on parenting and adjustment of youth in immigrant families has focused on Latinos, we know little about these processes in Asian immigrant families. We focus on a sample of Chinese American families. While Latino and Chinese Americans likely share a cultural emphasis on family interdependence and parental authority (Fuligni et al. 1999), the specific cultural parenting practices of these groups and the local contexts toward which they acculturate may yet differ. In particular, Chinese parenting traditions often emphasize parental authority (Chao and Tseng 2002). Indeed, Chinese American parents report establishing more strict rules and limits on children's conduct, granting less autonomy and expecting more obedience than European American parents (Wu 1996).

Given that parenting has been studied mostly among European American samples, parental control used in Chinese American families has often been mischaracterized as "authoritarian" and "restrictive." Chao (1994) suggests that Chinese parenting practices, involving control and strict discipline, may be perceived as punitive by European American standards but actually involve a degree of involvement and concern that is not adequately captured by Western parenting constructs and measures. In fact, research has found that parental control is linked not only to higher levels of family warmth and cohesion among Chinese families (Lau and Cheung 1987), but also to higher levels of self-regulation, confidence, positive relationship attitudes, and frustration tolerance among Chinese children (Xu et al. 1991).

While the association between parental acculturation and parenting in Chinese American families has been relatively unexamined, a cross-national study conducted by Lin and Fu (1990) found that Chinese mothers in China had higher parental control ratings than immigrant Chinese mothers in the U.S., who, in turn, had higher parental control ratings than Caucasian American mothers. The authors suggested that there may have been a change in parenting among immigrant mothers due to acculturation. Therefore, it is possible that as Chinese Americans acculturate to more mainstream European American parenting norms; they may exert less behavioral control and monitoring of children, allowing increased child autonomy. However, more research is needed to corroborate these findings. Additionally, to our knowledge, no studies have examined how harsh discipline may be associated with acculturation amongst Chinese American families.

Present Study

The purpose of this study was to delineate more clearly the relationship between maternal acculturation, neighborhood context, parenting practices, and youths' conduct problems. The current study sought to extend the previous literature by examining three research questions. First, we investigated whether a relationship exists between maternal acculturation and parenting in Chinese immigrant families, and whether this relationship may explain patterns of adolescents' conduct problems. It was anticipated that the association between maternal

acculturation and adolescents' conduct problems would be explained by differences in mothers' reliance on monitoring and harsh discipline. However, directional hypotheses were not proposed because of previous mixed results in research regarding the relationship between maternal acculturation and parenting in immigrant and minority families. Second, we investigated the relative contributions of individual-level acculturation and neighborhood-level socioeconomic variables on parenting. Finally, we examined whether the associations between maternal acculturation, parenting, and youths' conduct problems differed depending on the characteristics of the neighborhoods in which Chinese American families settle. We explored a key proposition informed by segmented assimilation theory by testing neighborhood disadvantage as a moderator of the relationship between maternal acculturation and parenting practices. Consistent with segmented assimilation theory, we hypothesized that the outcomes of acculturation may vary depending on the context. For example, families adapting toward American norms within settings of privilege may be likely to use less harsh discipline and more likely to have the resources to ensure close monitoring.

Methods

Participants

The study sample consisted of 444 Chinese American adolescents, along with 408 of their mothers and 382 of their fathers. Slightly over half of the adolescent sample were girls ($n = 238$, 54%). The age of the adolescents ranged from 12 to 15; the average age was 13. Adolescents were in seventh or eighth grade. Most of the parents were immigrants (mothers = 90%, fathers = 87%), while most adolescents were born in the United States ($n = 334$, 75%). Length of time in the U.S. was an average of 17.46 years ($SD = 9.73$) for fathers and 15.74 years ($SD = 8.36$) for mothers. A majority of the adolescents lived in intact families with two parents (87%), 7% lived with their mothers only, 1.1% with their fathers only, and the remaining lived in other arrangements. At the neighborhood level, there were 109 census tracts with a range of 1–32 families per tract, and an average of 4.18 families per tract.

On average, family income was in the range of \$30,001–\$45,000, and the majority of parents had finished high school (mothers = 69%, fathers = 64%). The present sample of Chinese American families was of lower socioeconomic status relative to the U.S. population of Chinese Americans. Specifically, the U.S. Census Public Use Microdata Sample (PUMS) revealed that the average Chinese American household with children in our age range had parents who had completed college and had much higher income levels than those in our sample.

Procedure

Participants were recruited from seven middle schools in major metropolitan areas of Northern California. This reflects the fact that most Chinese in the U.S. reside in metropolitan urban areas. There was considerable diversity in the Chinese American population across the selected schools, where Asian American students comprised between 19 and 60% of the school population. This was important to capture the experiences of students who were in the minority as well as the majority at their schools. School size ranged from 794 to 1,306 students; the average school size was 1,075 students.

With the aid of school administrators, Chinese American students were identified and all eligible families were sent a letter describing the research project. After researchers received consent, participants were sent 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. At least one follow-up call was made to the families to remind them about returning

the questionnaires. Target adolescents who returned family questionnaires were compensated a nominal amount of money for their participation. Of all eligible families who were contacted, 47% agreed to participate. Of these families, 76% completed 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 then resolved by two bilingual/bicultural research assistants with careful consideration of the culturally appropriate meaning of items. More than 70% of parents used the Chinese language version of the questionnaire (Fathers, $n = 371$, 71%; Mothers, $n = 291$, 71%); the majority of adolescents used the English version ($n = 378$, 85%).

Measures

Demographic Variables—Family socioeconomic status was assessed through measures of education and family income. Maternal and paternal education levels were categorized on a nine-point scale where (1) represented “no formal schooling” and (9) represented “completion of a graduate degree.” Using a scale ranging from (1) “\$15,000 or under” to (12) “\$165,001 or more,” mothers and fathers each reported their gross family income. The highest level of income reported and education achieved by either parent were used as covariates in the regression analyses. The internal consistency for family education and family income were moderately high ($\alpha_{\text{income}} = 0.70$, $\alpha_{\text{education}} = 0.70$).

Acculturation—The Vancouver Index of Acculturation reflects a bi-dimensional model of acculturation that takes into account acculturation toward mainstream North American culture as well as enculturation in the heritage culture of origin (Ryder et al. 2000). Using a scale ranging from (1) “strongly disagree” to (5) “strongly agree,” mothers, fathers, and adolescents within each family responded to ten questions on their American Orientation and ten questions on their Chinese Orientation. Because the focus of this study is the extent to which parenting differs with parental acculturation to mainstream American values, only maternal and paternal reports on items from the American Orientation dimension was included in the study. The measure consisted of questions on values, cultural practices, and interactions with people from each ethnic group (e.g., “follow mainstream American cultural traditions,” “behave in ways that are typical of the American culture,” and “enjoy social activities with Americans”). The internal consistency for the acculturation items was high ($\alpha_{\text{mother}} = 0.84$, $\alpha_{\text{father}} = 0.83$).

Parenting—Parenting was assessed through measures adapted from the Iowa Youth and Families Project (Conger et al. 1995; Ge et al. 1996a). Using a scale ranging from (1) “never” to (5) “always,” parents rated three items measuring monitoring (e.g., know whereabouts of adolescent, whom adolescent is with, whether the adolescent complied with the set bed time; $\alpha_{\text{mother}} = 0.78$, $\alpha_{\text{father}} = 0.76$). We acknowledge that this monitoring scale actually measures knowledge of children’s activities and whereabouts rather than monitoring behaviors per se. However, parental knowledge has been found to be associated with monitoring behaviors (Stattin and Kerr 2000). Additionally, using the same five-point rating scale, parents rated three items measuring harsh discipline (e.g., spank, slap, punish with a belt or paddle, lock you out of the house; $\alpha_{\text{mother}} = 0.52$, $\alpha_{\text{father}} = 0.65$). A log transformation was performed on harsh discipline to reduce positive skew.

Conduct Problems—A measure adapted from the Child Behavior Checklist (Achenbach 1991) was used to assess conduct problems (e.g., stealing, running away, and lying) within the past 6 months. Twelve items were rated on a scale of (0) “not true” to (2) “often true.” This measure was a modified version of the CBCL Delinquency Scale which excluded the items “thinks about sex” and “vandalism” at the request of the school district, and included an additional item “Is part of a gang.” The internal consistency for the conduct problems composite

was moderately high with ratings of conduct problems obtained from the mother, father and adolescent in each family surveyed ($\alpha_{\text{adolescent}} = 0.64$, $\alpha_{\text{mother}} = 0.62$, $\alpha_{\text{father}} = 0.71$). Maternal ratings were correlated with paternal ratings ($r = 0.40$, $p < 0.01$) and adolescents' ratings ($r = 0.165$, $p < 0.01$). Adolescents' ratings were also correlated with paternal ratings ($r = 0.209$, $p < 0.01$).

In the hierarchical linear models tested, we used a composite score constructed by taking the maximum score for each item on the CBCL across reports from the mother, father and child. For example, if any of the informants (the mother, father, or adolescent) reported that a symptom was frequently observed, then the symptom was coded a '2' (where '2' = often). This approach is akin to common methods for combining parent and adolescent symptom reports to maximize reliability of diagnostic classifications when underreporting of problems is anticipated by any single informant (Jensen et al. 1995). Additionally, while inconsistencies due to lack of knowledge or underreporting may have led to moderate correlations between maternal, paternal and adolescents' ratings of conduct problems, the conduct problems composite score is highly correlated with each of the informant's ratings (see Table 1).

Neighborhood Context—Census tracts are statistical subdivisions of a county with an average of 4,000 inhabitants per tract. Given that population density varies across different areas, the physical size of a census tract also varies. In our study, the size of a census tract ranged from ~0.5 to 7 miles in length. Analysis of data at the block group level, an even smaller statistical subdivision of neighborhoods, was not possible due to the small number of families residing within each block group.

Participants' home addresses were used to extract geo-coded data on neighborhood characteristics from the US Census website at the census tract level. The geo-coded process involves connecting standard codes for geographical units (e.g., county, city, census tract) to addresses. The codes were then used to extract neighborhood variables including the percent unemployed, percent with less than high school education, median income, percent below poverty, percent non-professionals, and percent female-headed households. These six factors have commonly been combined to measure neighborhood SES (e.g., Leventhal and Brooks-Gunn 2000), and exhibit good variability. For example, the percentage of female-headed households ranged from 18.5 to 56.9%, and family income ranged from \$12,000 to \$107,000, with the average household income in a neighborhood being ~\$53,000. A composite score for neighborhood disadvantage was computed by adding the standardized scores of these six variables. The neighborhood disadvantage composite had high internal consistency ($\alpha = 0.87$) with a range of -9.37 to 15.37 and mean of 0.88.

Analysis Methods

Missing data for the level 1 variables ranged from 0.5% (for adolescent's age) to 8.3% (for maternal acculturation and maternal monitoring). There was no missing data at level 2. Because dropping cases with missing data may lead to biased results, it is generally not recommended to analyze only those cases with complete data (Allison 2001). Hence multiple imputation method (Rubin 1987) was used to estimate missing responses. Imputations were used to create ten separate "data sets" which were then used to replicate analyses using multiple estimation methods in HLM (Version 6.04) to test both mediation and moderation models. The parameter estimates in these replications were averaged to obtain multiple-imputation parameter estimates, while parameter variance was estimated by combining the mean within-replication variance with the variance of the parameter estimates across the replications through standard multiple-imputation averaging (Rubin 1987).

Results

Preliminary Analyses

Bivariate correlations for all study variables of interest are presented in Table 1. Maternal acculturation was significantly correlated with adolescents' conduct problems ($r = -0.105, p < 0.05$), maternal harsh discipline ($r = -0.188, p < 0.01$), and maternal monitoring ($r = 0.26, p < 0.01$). However, paternal acculturation was significantly correlated only with paternal monitoring ($r = 0.233, p < 0.01$), but not with paternal harsh discipline or adolescents' conduct problems. For these reasons, the subsequent analyses focused only on maternal acculturation and parenting.

Adolescents' gender was not significantly correlated with any of the variables but adolescents' age was found to be significantly correlated to maternal monitoring ($r = -0.10, p < 0.05$) and adolescents' conduct problems ($r = 0.094, p < 0.05$). Family level education and income were significantly correlated to maternal acculturation ($r = 0.297, p < 0.01$; $r = 0.332, p < 0.01$). Hence, adolescents' age, family education, and family income were included as covariates in the regression analyses.

Research Question 1: Do Parenting Variables Mediate the Relationship Between Maternal Acculturation and Youths' Conduct Problems?

The relationship between maternal acculturation, maternal monitoring, maternal harsh discipline, and adolescents' conduct problems was examined using multilevel modeling that more appropriately tests for mediational effects in clustered data by correcting for downwardly biased standard error estimates associated with positive intraclass correlation (Krull and MacKinnon 2001). In our mediation models, we specified that maternal monitoring and maternal harsh discipline would mediate the relationship between maternal acculturation and adolescents' conduct problems. Mediation was tested according to the basic three-step framework outlined by Baron and Kenny (1986). Adolescents' conduct problems were initially regressed onto maternal acculturation to determine the effect of acculturation without the influence of a mediator. Maternal acculturation was significantly associated with adolescents' conduct problems ($\beta = -0.045, p < 0.05$). Then, in separate analyses for each mediator, monitoring and harsh discipline were regressed on maternal acculturation ($\beta = 0.239, p < 0.01$; $\beta = -0.087, p < 0.01$, respectively). Lastly, adolescents' conduct problems were simultaneously regressed on maternal acculturation along with the targeted mediator. The regression coefficients for maternal acculturation decreased and were no longer significant after inclusion of the mediator in both cases where monitoring ($\beta = -0.035, p = 0.07$) and harsh discipline ($\beta = -0.030, p = 0.11$) were mediators. To determine whether the decrease in beta was significant for each mediator, the Sobel test was employed (Sobel 1982). The mediated effect was significant for both mediators: monitoring, $z = -2.24, p < 0.05$ (Fig. 1), and harsh discipline, $z = -2.33, p < 0.05$ (Fig. 2). Results suggested that greater maternal acculturation was associated with more monitoring and less harsh discipline, which was related to lower levels of youths' conduct problems. These results held after controlling for adolescents' age, family income, and education.

Research Question 2: What are the Relative Contributions of Maternal Acculturation and Neighborhood Disadvantage on Parenting?

In the second set of analyses, neighborhood level variables were incorporated through hierarchical linear modeling. Multilevel modeling is necessary to account for the correlation of responses within naturally formed neighborhood units (census tracts) that make up the nested data structure with families nested within neighborhoods (Kreft and DeLeeuw 1998). The direct effects of individual-level maternal acculturation and neighborhood-level socioeconomic disadvantage were examined in models predicting parenting.

As the study focused on two aspects of parenting, maternal monitoring and harsh discipline, 2 two-level models were constructed to examine the independent effects of maternal acculturation and neighborhood disadvantage on parenting. The outcome variable was maternal monitoring in model 1, and maternal harsh discipline in model 2. In model 1, level 1 estimated individual variations in levels of maternal monitoring. Adolescents' age, maternal acculturation, and family education and income were expected to account for significant portions of the variance associated with individual differences. Level 2 included systematic variations in levels of maternal monitoring between neighborhoods. Neighborhood disadvantage was expected to account for significant portions of the variance associated with neighborhood differences. Similarly, in model 2, level 1 modeled family differences in levels of maternal harsh discipline, with maternal acculturation and family income and education as hypothesized predictors, whereas level 2 investigated between-neighborhood differences, with neighborhood disadvantage as a predictor.

Results presented in Table 2 indicated that increases in maternal acculturation and family education were associated with higher levels of monitoring ($b = 0.265, p < 0.01$; $b = 0.073, p < 0.05$). Family income and adolescents' age were not associated with monitoring. At the neighborhood-level, higher levels of neighborhood disadvantage were significantly associated with lower levels of monitoring ($\beta = -0.021, p < 0.05$). Results displayed in Table 2 also indicated that increased maternal acculturation was significantly associated with lower reliance on harsh discipline ($\beta = -0.104, p < 0.01$). Family education was not significantly related to harsh discipline. However, there were non-significant trends in which lower family income ($\beta = -0.011, p = 0.06$) and more neighborhood disadvantage ($\beta = 0.006, p = 0.11$) were related to higher levels of harsh discipline.

Research Question 3: Does Neighborhood Disadvantage Moderate the Relationship Between Maternal Acculturation and Parenting?

In order to test a premise derived from segmented assimilation theory, we had intended to enter the interaction of neighborhood disadvantage with maternal acculturation at level 2. However, upon examination of the random effects of the unconditional models (i.e., the models with no predictors), the level 2 variance components corresponding to the slope of maternal acculturation on parenting variables were not statistically significant (in model 1, $U = 0.005, p > 0.500$; in model 2, $U = 0.016, p > 0.500$), indicating that there was no significant variability in the relationship between maternal acculturation and parenting across neighborhoods. Therefore, it was unnecessary to test neighborhood disadvantage as a moderator of the relationship between mothers' acculturation and parenting, as it would invariably produce non-significant results. In the final data analysis, variance components corresponding to the effect of neighborhood factors on the relationship between maternal acculturation and parenting were estimated as fixed effects.

Discussion

The purpose of this study was to examine the relations between maternal acculturation, parenting practices, neighborhood disadvantage and their associations with conduct problems among Chinese American adolescents. The current study focused on maternal acculturation, because preliminary analyses indicated that fathers' acculturation did not significantly relate to adolescents' conduct problems. Our pattern of findings is consistent with research that points to the influential role of maternal acculturation (Crouter et al. 2006; Kim et al. 2006), suggesting that mothers play a particularly important role in socializing children and linking the family to a broader network of relatives and friends.

Our results suggested that Chinese American mothers who report greater acculturation toward American culture have adolescents who display lower levels of conduct problems. This pattern

could be explained by the finding that more highly acculturated mothers relied more on monitoring and less on harsh discipline. These results are consistent with results reported by Dumka et al. (1997) who found that higher levels of maternal acculturation were related to more positive maternal parenting practices in Mexican American families. However, our findings are inconsistent with studies that have suggested that protective parenting practices erode with advancing acculturation in minority families (Fridrich and Flannery 1995; Samaniego and Gonzales 1999; Dinh et al. 2002). It is important to note that our findings are consistent with those from the Dumka et al. study where maternal acculturation was measured directly, whereas the other studies focused on youths' own level of acculturation and youths' reports of parenting practices. These inconsistencies in results suggest the importance of assessing maternal acculturation directly, rather than making inferences about maternal acculturation based on youths' acculturation.

To examine broader contextual influences on processes in Chinese American families, we investigated the direct effects of neighborhood-level variables in addition to individual-level variables on parenting. Maternal acculturation was related to more protective parenting practices in terms of greater use of monitoring and less harsh discipline. Moreover, consistent with prior research findings that parents living in neighborhoods with higher levels of poverty and unemployment tend to display less warmth and higher levels of harsh and inconsistent discipline (Simons et al. 1997), neighborhood disadvantage was significantly associated with less maternal monitoring and was marginally associated with more harsh discipline. As suggested by previous research, it may be that when faced with the chronic stress of living in neighborhoods with few economic and public resources, Chinese American parents are less able to garner the energy needed to set limits in a positive and supportive manner (Pinderhughes et al. 2001). Other investigators have noted that higher levels of neighborhood stress lead to increased levels of maternal psychological distress which in turn impairs parenting effectiveness (Gutman et al. 2005; Kotchick et al. 2005). Neighborhood disadvantage may also be related to compromised parenting due to lowered levels of social capital and collective efficacy within the community. Disadvantaged neighborhoods characterized by high levels of residential mobility and populated by impoverished residents also tend to have low levels of social capital and collective efficacy in the rearing of youth (Sampson et al. 1999). Parents living in these conditions thus have fewer social ties and resources that help them overcome parenting challenges and utilize protective childrearing strategies.

On the face of it, neighborhood disadvantage being associated with less monitoring seems consistent with the general proposition that exposure to disfavored segments of society can lead to downward assimilation. Thus, we tested the hypothesis that increasing maternal acculturation toward American culture has differential family outcomes depending on the local context of the neighborhood. We examined whether neighborhood disadvantage moderated the relationship between maternal acculturation and parenting. However, evidence for such an interaction was not found. There was no meaningful variability in the relationship between maternal acculturation and parenting across the neighborhoods we studied. As such, our proposition informed by segmented assimilation theory was not supported.

Investigators have noted that direct effects of neighborhood disadvantage and interactions with other variables of interest are extremely difficult to detect using census tract data, and neighborhood effects on family outcomes tend to be small in magnitude (Silk et al. 2004). Some researchers argue that objective data on census tracts may not be an appropriate representation of a neighborhood, as neighborhoods are more subjectively represented by one's family members and friends who may not reside within the same census tract. Nonetheless, the theoretical appeal of the segmented assimilation is clear. Evidence of both downward assimilation and upward ascent toward healthy adaptation has been noted among acculturating groups (Zhou 1997). It remains important to identify the circumstances under which

acculturation toward American norms is risky and when it is beneficial. A review of the literature yielded mixed impressions about whether acculturation has positive or negative implications for childrearing practices. In our study, maternal acculturation appeared to yield positive outcomes in parenting and youth conduct. However, we may not have examined the most relevant aspects of neighborhoods to test adequately for the differential effect of acculturation by context.

There are several limitations of this study that must be addressed. The data collected were limited to families in urban areas of Northern California where the density of Chinese in neighborhoods is higher than in most regions of the U.S. Such a restricted range in ethnic density in the communities under investigation may have limited our ability to test hypotheses about the effects of acculturation to mainstream culture and its interaction with socioeconomic disadvantage. It is also possible that families in our study exhibited better than typical adjustment or resilience due to greater social supports and resources available given the co-ethnic density of their neighborhoods. Future studies should examine the effects of ethnic density on acculturation and children's outcomes, and sampling should be broadened to include families from more ethnically isolated areas of U.S. In addition, we may not have had a sufficient number of families within neighborhood clusters to provide a strong test of contextual variation in the associations between maternal acculturation and parenting. A significant number of the neighborhoods were represented by only one family. These single-family neighborhoods were included in the estimation of the fixed effects, but did not contribute to the estimation of random effects, resulting in less power for detecting variability between neighborhoods.

The study was also limited by use of ratings of acculturation attitudes that may not have comprehensively assessed the most relevant domains of acculturation. Future studies should attend both to enculturation within the traditional heritage culture as well as acculturation toward mainstream patterns of socialization, as factors involving protective aspects of ethnic and cultural socialization are often invoked in discussions of adaptive outcomes among immigrant youth. Additionally, although the adolescents' acculturation was not examined in this study, the majority of the adolescents who participated in this study were born in the U.S. It is possible that children's acculturation and/or parent-child differences in acculturation may also be related to changes in parenting practices and children's adjustment (Weaver and Kim 2008).

The parenting measures used in this study also posed limitations. Parental monitoring was measured by assessing parents' knowledge of children's activities rather than monitoring behaviors (Stattin and Kerr 2000). Although parental knowledge has been found to be associated with parental monitoring (Stattin and Kerr 2000), empirical questions remain about how actual monitoring behaviors may be related to parental acculturation and children's adjustment. In addition, the internal consistency of the harsh discipline scale was low, raising concerns about reliability and validity. We used the same harsh discipline scale used by Kim and Ge (2000), who reported high reliability for the scale and predictive validity with children's depressive symptoms. However, harsh discipline may be becoming socially less acceptable in contemporary Chinese families and lower rates of endorsement on a small number of items limits alpha reliability (Lansford et al. 2005).

Lastly, our findings were based on cross-sectional data and thus do not support causal directionality. For example, rather than parenting leading to adolescents' conduct problems, the reverse may also occur; parents may be adjusting their parenting strategies in response to adolescents' displays of conduct problems. Future studies should use longitudinal data to clarify relationships between parental acculturation, parenting, and children's behaviors.

These limitations notwithstanding, the results of the study provide some additional evidence that the degree to which immigrant mothers acculturate to mainstream North American culture appears to be related to youths' behavioral outcomes via differences in reliance on parenting practices such as monitoring and harsh discipline. Although the link between maternal acculturation and family functioning in terms of parenting practices and youths' conduct problems did not depend on the socioeconomic context of the neighborhood, it is possible that limitations in our study sample may have rendered a conservative test of this hypothesis. Future research should persist in pursuing explanations for why acculturation may yield the variability in outcomes for immigrant and minority families that has previously been observed in the literature. These explanations regarding the circumstances under which acculturation leads to differential outcomes would have important implications in our increasingly diverse communities.

Acknowledgments

Support for this research was provided through awards to Dr. Su Yeong Kim from the (1) American Psychological Foundation/Council of Graduate Departments of Psychology, Ruth G. and Joseph D. Matarazzo Grant; (2) California Association of Family and Consumer Sciences, Extended Education Fund; and (3) American Association of Family and Consumer Sciences, Massachusetts Avenue Building Assets Fund; and an award to Dr. Angela Chia-Chen Chen from the (4) American Nurses Foundation Grant.

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Biographies

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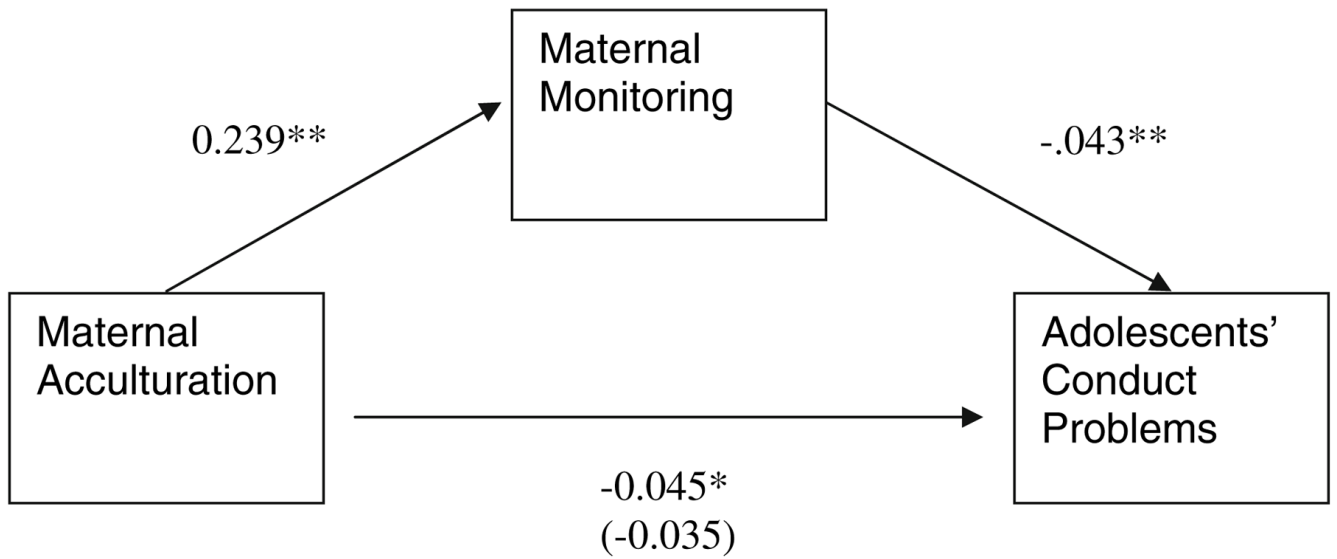


Fig. 1. The effect of maternal acculturation on adolescents' conduct problems is mediated by maternal monitoring (* $p < 0.05$; ** $p < 0.01$)

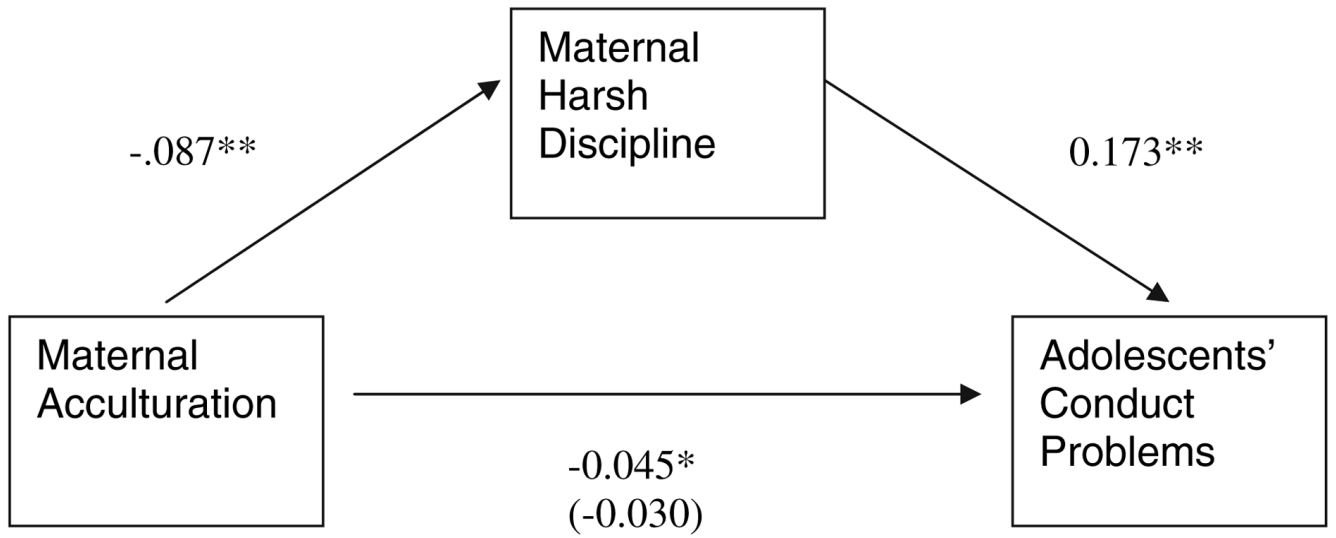


Fig. 2.
The effect of maternal acculturation on adolescents' conduct problems is mediated by maternal harsh discipline ($*p < 0.05$; $**p < 0.01$)

Table 1
Bivariate correlations for all individual-level variables of interest

Variable	1	2	3	4	5	6	7	8	9	10
1. Maternal acculturation	–	0.45**	0.26**	0.16**	-0.19**	-0.01	-0.11*	-0.05	-0.06	-0.11*
2. Paternal acculturation		–	0.24**	0.23**	-0.10	0.01	-0.13*	-0.07	0.01	-0.03
3. Maternal monitoring			–	0.50**	-0.19**	-0.15**	-0.27**	-0.19**	0.07	-0.16**
4. Paternal monitoring				–	-0.12*	-0.13*	-0.27**	-0.31**	-0.11**	-0.20**
5. Maternal harsh discipline					–	0.31**	0.32**	0.27**	0.11*	0.25**
6. Paternal harsh discipline						–	0.28**	0.20**	-0.09	0.19**
7. Conduct problems, maternal report							–	0.40**	0.17**	0.56**
8. Conduct problems, paternal report								–	0.21**	0.55**
9. Conduct problems, adolescents' report									–	0.76**
10. Conduct problems, composite										–
Mean	3.39	3.43	4.24	4.06	1.28	1.25	1.18	1.18	1.22	1.36
Standard deviation	0.52	0.49	0.75	0.79	0.40	0.44	0.14	0.16	0.17	0.19

* $p < 0.05$;

** $p < 0.01$; Due to missing data, n 's range from 343 to 444

Table 2
Hierarchical linear models testing individual-level (level 1) and neighborhood-level (level 2) effects

Fixed effects	Model 1: Monitoring		Model 2: Harsh discipline		<i>p</i>
	β	<i>t</i>	β	<i>t</i>	
Level 1					
Intercept	4.23 (0.04)	94.65	0.22 (0.02)	14.17	0.00
Effect of adolescents' age	-0.02 (0.05)	-0.43			
Effect of maternal acculturation	0.26 (0.08)	3.49	-0.10 (0.03)	-3.08	0.00
Effect of family education	0.07 (0.03)	2.48	0.01 (0.01)	0.82	0.41
Effect of family income	0.02 (0.02)	1.07	-0.01 (0.01)	-1.88	0.06
Level 2					
Effect of neighborhood disadvantage	-0.02 (0.01)	-2.21	0.01 (0.00)	1.62	0.11
N. disadvantage \times maternal acculturation		Not tested ^a		Not tested ^a	

^aVariance estimates indicated that there was no significant variability in the relationship between maternal acculturation and parenting across neighborhoods

Numbers in parentheses are standard errors of the coefficients