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Examining the Interdependence of Parent-adolescent Acculturation Gaps on Acculturation-based Conflict: Using the Actor-Partner Interdependence Model

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Abstract

While some studies have supported the conceptual models developed to explain how conflict may result from parent-adolescent acculturation gaps within immigrant families, others have produced contradictory findings. Therefore, the Actor-Partner Interdependence Model may be a step toward explaining the discrepancies in the field. It is a model for dyadic data analysis. It differs from prior approaches for assessing acculturation gaps because it considers the interdependence between two family members, suggesting that adolescents' perceived degree of conflict may be a response to their own acculturation (actor effect) and at the same time, to their parents' acculturation (partner effect), and vice versa. The purpose of this study is to assess parent-adolescent acculturation levels on perceived acculturation-based conflict using the Actor-Partner Interdependence Model within Chinese American families ($n=187$ dyads). The mean age of the adolescents was 12.3 years old ($SD = 0.95$). Findings from the study demonstrate that adolescents perceived greater conflict the more they were acculturated but perceived less conflict the more their parents were acculturated. Parents perceived less conflict the higher their adolescents scored on both acculturation and cultural maintenance. However, parents perceived greater conflict the higher they maintained their own culture. Results suggest that the partner effects reveal information that may help clarify whether acculturation gaps are related to conflict within immigrant families.

Introduction

Acculturation gaps have been examined by how they may lead to acculturation-based conflict among immigrant families (Lui, 2018). These gaps can occur between immigrant parents and their children from adapting to the host country at dissimilar rates (Portes, 1997). Two conceptual models support this research. First is the acculturation gap-distress hypothesis, which asserts that among immigrant families, adolescents acculturate faster than their parents leading to family conflict and youth maladjustment (Szapocznik & Kurtines, 1993). Second is the theory of Acculturative Family Distancing, which hypothesizes that the parent-child acculturation gap leads to a breakdown of communication and differences in

cultural values, thereby increasing risk for family conflict among immigrant families (Hwang, 2006). Despite these models, studies that have examined acculturation gaps on family conflict have led to inconsistent findings (Telzer, Yuen, Gonzales, & Fuligni, 2016).

The purpose of this study is to examine how parent and adolescent acculturation levels are associated with their perceived acculturation-based conflict within Chinese American families in Chicago's Chinatown by applying an approach developed for dyadic data, called the *Actor-Partner Interdependence Model* by Kenny and colleagues (Kenny, Kashy, & Cook, 2006). It is a model for dyadic data analysis in which the dyad is the unit of analysis. This model suggests that a person's independent variable affects his or her own dependent variable, as well as his or her partner's outcome simultaneously (Kenny, 1996). The Actor-Partner Interdependence Model differs from prior approaches for assessing acculturation gaps because it considers the interdependence between two family members. It has been recommended as an analytical method potentially useful for measuring acculturation gaps (Costigan, 2010). While the Actor-Partner Interdependence Model has been used to analyze dyadic data within families (Titzmann & Gniewosz, 2017), no known studies have applied it to examine differing parent-adolescent acculturation levels on acculturation-based conflict.

Acculturation-based Conflict

Acculturation-based conflict can intensify tensions between parent and adolescent (Juang, Syed, & Cookston, 2012). This type of conflict results from parent-adolescent differences over cultural values, norms, practices, and other culturally-based dissimilarities that reflect the contrasts between the country of origin and the new host country (Juang, Syed, Cookston, Wang, & Kim, 2012). For example, acculturation-based conflict can occur when differences emerge between adolescents and their parents over physical expressions of love and affection, communication, as well as goals, beliefs, and values (Qin, Chang, Han, & Chee, 2012). It is distinct from and in addition to normative conflict that develops during adolescence, exemplified by disagreements over household chores, schoolwork, and time spent with friends (Juang et al., 2012). Acculturation-based conflict is otherwise known as intercultural conflict (Szapocznik & Kurtines, 1993), intergenerational acculturation conflict (Kim, 2011), intergenerational cultural dissonance (Choi, He, & Harachi, 2008), and intergenerational cultural conflict (Lui, 2015).

Among Asian American families, most of the research examining this relationship has been conducted among those whose children are in mid to late adolescence and emerging adulthood (Lui, 2018; Tsai-Chae & Nagata, 2008). Less is known about this relationship in early adolescence. However, one longitudinal study by Ying and Han (2007) showed that a perceived acculturation gap during early adolescence among Southeast Asian Americans predicted acculturation-based conflict in late adolescence. Early adolescence is a critical period of time when adolescents begin to form and shape their own identities and develop norms, values, beliefs, and expectations that may move away from their parents'. Past studies have demonstrated that conflict between parents and their adolescents intensifies during early adolescence or the middle school years, which may be associated with the onset of puberty (Allison, 2000). Among Chinese American adolescents, acculturation-based conflict is associated with mental distress, loneliness, low self-esteem, anxiety, somatic

complaints, and externalizing behaviors (Qin, 2006; Fung & Lau, 2010; Hwang, Wood, & Fujimoto, 2010; Juang et al., 2012; Kim, Chen, Wang, Shen, & Orozco-Lapray, 2013; Lui, 2018). This research suggests that acculturation-based conflict often occurs among Chinese American families. Conflict may be particularly salient for Chinese American adolescent health and well-being due to its collectivist values of family harmony and respect for authority (Costigan & Dokis, 2006).

The Actor-Partner Interdependence Model

The interdependent nature of the parent-adolescent relationship is important for understanding how conflict develops within a family. For example, Chinese parents may perceive more conflict as their adolescents adopts more “American” attitudes toward confronting parental authority for greater independence and autonomy. Therefore, the more acculturated the adolescent is, the greater the parent perceives conflict. This is not the same as a commonly used method for assessing acculturation gaps on conflict, which measures the difference between parent-adolescent acculturation levels to determine if this gap is associated with conflict, also called the difference score method (Telzer, 2010). For example, there may be small to no acculturation differences between parent and adolescent, but the degree of the adolescent’s acculturation may still influence the parent so that he/she perceives greater conflict.

Within a parent-adolescent dyad, the Actor-Partner Interdependence Model examines 4 relationships between acculturation and conflict *simultaneously*: (1) adolescents’ acculturation on their perceived conflict, called the *adolescents’ actor effect*; (2) adolescents’ acculturation on their parents’ perceived conflict, *adolescents’ partner effect*; (3) parents’ acculturation on their own perceived conflict, *parents’ actor effect*, and (4) parents’ acculturation on their adolescents’ perceived conflict, *parents’ partner effect*. Consequently, an adolescent’s perceived degree of conflict may be a response to his/her own acculturation and at the same time, to his/her parent’s acculturation, revealing the influence the parent has on the adolescent. Similarly, the parent’s perceived degree of conflict may be a response to his/her own acculturation and to his/her adolescent’s level of acculturation.

The Actor-Partner Interdependence Model, therefore, also differs from the interaction method for assessing acculturation gaps on conflict. This method takes the interaction of the parent and adolescent acculturation levels (by multiplying the levels) and enters them simultaneously with the main effects of the parent’s and adolescent’s acculturation levels into a regression model to predict conflict (Telzer, 2010). The interaction method examines whether parent-adolescent acculturation gaps predict outcomes above and beyond individual levels of acculturation (Birman, 2006). Unlike the Actor-Partner Interdependence Model, the interaction method assesses whether adolescents’ acculturation on their own perceived conflict act independently from their parents’ acculturation and vice versa (Telzer, 2010). By not recognizing possible partner effects, the actor effects, or the adolescents (or parents) acculturation on their own perceived conflict, can be overestimated (Kenny et al., 2006).

At the same time, the Actor-Partner Interdependence Model can include interactions at the dyadic level. An example of a dyadic-level interaction is the absolute difference between parent-adolescent acculturation levels, which will be called the *actor-partner discrepancy*

score. The *actor-partner discrepancy score* provides information about the importance of the magnitude of the difference. The size of the gap still proves meaningful for interpreting their results on consequences (Costigan, 2010), for example, whether the larger the gap is associated with greater perceived conflict by parent, adolescent, or both. Another dyadic-level interaction is the product of the parent and adolescent acculturation levels, called the *actor-partner product score*. The actor-partner product score differs from the interaction method. The interaction method creates combinations from parent-adolescent acculturation levels representing different types of acculturation gaps (e.g. parent scores low on acculturation and the adolescent scores high on acculturation within a dyad) to determine if they predict outcomes above and beyond each individual acculturation level (Birman, 2006).

The *actor-partner product score* determines whether the partner's independent variable moderates the effect of the actor's independent variable (Cook & Kenny, 2005). For example, the effect of a parent's acculturation on his/her own perceived conflict (actor effect) strengthens as his/her adolescent (partner) is more acculturated. Perhaps, if the parent is highly acculturated, the probability is greater that the adolescent will similarly be more acculturated, and thus more likely to confront parental authority. However, the effect of a parent's acculturation on his/her own perceived conflict can also decrease in strength as his/her adolescent is more acculturated. This may be because the adolescent is similarly acculturated to his/her parent so that the parent perceives less conflict.

Current Study

The purpose of this study is to assess the interdependent nature of parent-adolescent acculturation levels on perceived acculturation-based conflict using the Actor-Partner Interdependence Model. Accordingly, there are two dimensions of acculturation to consider in understanding perceived conflict within Chinese American parent-adolescent dyads: acculturation to American-oriented behaviors and cultural maintenance of Chinese-oriented behaviors. Within each acculturation dimension, there are four main effects specified by the Actor-Partner Interdependence Model, illustrated in Figure 1. The first effect is the adolescent's acculturation (cultural maintenance) on his/her perceived conflict with the parent (adolescent's actor effect symbolized by a_a). Second is the effect of the parent's acculturation (cultural maintenance) on his/her perceived conflict with the adolescent (parent's actor effect, a_p). The third effect is the adolescent's acculturation (cultural maintenance) on his/her parent's perceived conflict (adolescent's partner effect, p_a). Finally, the fourth effect is the parent's acculturation (cultural maintenance) on his/her adolescent's perceived conflict (parent's partner effect, p_p). Therefore, within the parent-adolescent dyads, individuals' levels of acculturation are hypothesized to be associated with their own perceived acculturation-based conflict, and at the same time, associated with each other's perceived conflict due to the interdependent nature of this family relationship.

The specific hypotheses are as follows. Adolescents' acculturation will be positively related to their own perceptions of conflict and positively related to their parents' perceptions of conflict (Hypothesis 1). Parents' acculturation will be negatively related to their own perceptions of conflict and negatively related to their adolescents' perceptions of conflict (Hypothesis 2). Adolescents' cultural maintenance will be negatively related to their own

perceptions of conflict and negatively related to their parents' perceptions of conflict (Hypothesis 3). Parents' cultural maintenance will be positively related to their own perceptions of conflict and positively related to their adolescents' perceptions of conflict (Hypothesis 4). In addition to these main effects, interaction effects (actor-partner product scores and actor-partner discrepancy scores) will be tested from parent and adolescent acculturation levels on perceived acculturation-based conflict in the models.

Methods

The sampling frame consisted of all students from different racial/ethnic backgrounds enrolled at three elementary schools (2 public and 1 private) in the 6th through 8th grades in the fall of 2011 in Chicago's Chinatown neighborhood (N = 745). One parent for each student was recruited to complete the parent questionnaire. The parent that was most involved in the daily activities of his/her adolescent was asked to participate. If two children from one family completed the survey, only the data from the oldest child was selected into the analyses. Therefore, one parent and one adolescent from each family were used to create parent-adolescent dyads. Participating schools had student populations that were 50% and over self-identified Asian (data on the distribution of Chinese ethnicity was unavailable).

Participants

Three hundred and sixty-two students and 391 parents completed the survey. Response rates were 48.6% and 52.5% among students and parents respectively. Among all participants, 241 parent-adolescent dyads were identified; the remaining participants included 151 parents whose adolescents did not participate and 121 adolescents unmatched with their parents. Among all dyads, 192 dyads were identified as Chinese American with the parent born outside the U.S. in China, Hong Kong, or Taiwan. Five dyads were deleted due to missing data on the key variable, perceived acculturation-based conflict, resulting in 187 dyads in the final analyses (Figure 2).

The mean age of the adolescents was 12.3 years old (SD = 0.95). Girls comprised 56.5% (n = 108) of the sample, and 41.9% (n = 80) were boys. Approximately half (49.7%) were born in the United States. Among parents, three-fourths of the sample was mothers (74.3%) and one-fourth fathers (25.7%). Mean age of parents was 42.2 years old (SD = 6.13). Around 72% of the parents did not receive a college degree, reporting high school or less education. Approximately 17% achieved some college or an associate's degree, and 6.8% attained a bachelor's. Nearly half (49.2%) of the parents reported a household income of \$20,000 or less; another 39.1% reported an income between \$20,001 and \$40,000; and 10.5% reported an income of more than \$40,001 in the past year. Among participants, 86.9% reported being married; 11.5% were divorced or separated. The most commonly reported country of birth outside the U.S. was China at 83.8%.

Procedures

The parent questionnaire, recruitment letters, informed consent, and other related materials were translated into Chinese (Mandarin) due to the limited English proficiency of the target population. Two professional translators completed parallel translations followed by a

committee review (i.e., principal investigator [MWS], two translators, and a bilingual research assistant) to determine the final translation (J. Harkness, Pennell, & Schoua-Glusberg, 2004; J. A. Harkness, Van de Vijver, & Johnson, 2003). Materials were translated into Simplified Chinese (formal written Chinese language used in mainland China) and Traditional Chinese (in Taiwan and Hong Kong).

Parents were recruited to participate in the research study with contacts made through letters, reminder postcards, and fliers sent home. Parents completed the survey at home, while students were administered the surveys in their classrooms. Students who were eligible to participate in the research study first received active permission by their parents. Only those students who then provided written assent by signing the informed assent form were given a survey.

Measures

Acculturation.—Behavioral acculturation was measured using the 18-item *Kviz-Choi Acculturation Scale*, which consists of a Within-Group (Chinese) subscale and an Outside-Group (American) subscale (Choi, 2006). The scale follows a two-dimensional model in which an individual's orientation to his/her culture of origin is independent of his/her orientation towards the host culture (Ryder, Alden, & Paulhus, 2000). It employs two independent unipolar subscales with the same items on each to assess the degree of identification to both cultural dimensions separately and independently, as widely recommended in the literature (Kim & Abreu, 2001). A higher score on a subscale indicates greater identification with that culture.

This measure assessed multiple domains such as social affiliation, daily living habits, language preference, media preferences, social activities, and feelings of acceptance and comfort with a cultural group (Choi, 2006). The 9 items on each subscale were: "I like to listen to Chinese (American) music," "I attend social functions with Chinese (American) people," "I eat traditional Chinese (American) foods," "I read Chinese (American) magazines or newspapers," "I speak a Chinese language (English) with members of my family," "I speak a Chinese language (English) with my friends," "I have acquaintances with people who are Chinese (American)," "I feel accepted by people who are Chinese (American)," and "I am totally comfortable with people who are Chinese (American)". Items were rated on a 5-point scale with the following response choices for both parent and adolescent questionnaires: "never", "rarely", "sometimes", "often", and "almost always".

Changes were made to two words on the adolescent's scale so that the terms "social functions" and "acquaintances" were changed to "parties" and "friends" respectively. Cronbach's alphas for this study indicated very good reliability for the scale: .78 and .80 for adolescents and parents on the Chinese subscale respectively. For the American subscale, the reliability coefficients were .86 for adolescents and .91 for parents.

Acculturation-based Conflict.

Two scales, *Intergenerational Congruence in Immigrant Families—Child Scale* (Ying, Lee, & Tsai, 2004) and the *Intergenerational Congruence in Immigrant Families—Parent Scale*

(Ying & Tracy, 2004) were used to assess acculturation-based conflict. This scale was chosen because it captures disagreement rather than open confrontations between adolescents and their parents, which may be more appropriate for this population due to its Asian cultural values that emphasize respect for authority and filial piety (Fuligni, 2012; Kim, Atkinson, & Yang, 1999). Second, strong internal reliability and validity have been established for both scales among samples of Chinese American parents and adolescents (Ying et al., 2004; Ying & Tracy, 2004). Third, on the adolescent survey, participants are asked to rate the level of agreement they perceive to have with their mothers and fathers separately (Ying et al., 2004). This allowed us to match the parent (mother or father) who completed the survey with his/her adolescent's perceived conflict with that parent.

All items on the original adolescent scale were used with slight wording changes made for greater clarity and simplicity. For example, the original term "demonstrate" was replaced with "show" so that one of the items became "My mother (father) and I agree on how we show our affection for each other." A second item that was originally stated as, "My mother (father) and I agree on the aims, goals, and things believed to be important in life" was rewritten into two statements as follows: "My mother (father) and I agree on the aims or goals in life" and "My mother (father) and I agree on what things are important in life." Lastly, during the pretest of the questionnaire, adolescents expressed difficulty in determining which settings were considered predominantly American or Chinese from two original items: (1) "My mother (father) and I agree on behavior in a predominantly American setting", and (2) "My mother (father) and I agree on behavior in a predominantly Chinese setting". Therefore, these two items were changed to: "My mother (father) and I agree on how I should behave." For the parent scale, the items were the same with the appropriate changes made to reflect the parent's perspective.

Response choices were coded on a 5-point scale: "strongly disagree," "disagree," "agree," "strongly agree," and "don't know." "Don't know" replaced the original response choice, "neither agree nor disagree", and was not included in the final scores. Items were reverse-coded. The higher the score indicated greater disagreement. Cronbach's alphas indicated very good reliability. Adolescents' reports of perceived conflict with the mother and father had alpha scores of .89 and .92 respectively. The parent report had an alpha score of .91.

Data Analyses

The Actor-Partner Interdependence Model was estimated using multi-level modeling (MLM). For MLM, a pairwise dataset (the structure for this type of dataset can be found in Kenny et al., 2006) is created so that only one equation is estimated for both members in a dyad with actor's X and partner's X as predictors. In MLM, the role in the family (parent or adolescent), interacts with the actor and partner effects to test moderating effects. The model for person i in dyad j with role in the family, denoted as R , which acts as a moderator is:

$$Y_{ij} = b_0 + b_1X_{ij} + b_2X'_{ij} + b_3R_{ij} + b_4X_{ij}R_{ij} + b_5X'_{ij}R_{ij} + e_{ij}.$$

where X is the actor variable, X' is the partner variable, b_0 is the intercept, b_1 is the coefficient of X_{ij} on Y_{ij} (actor effect), b_2 is the coefficient of X'_{ij} on Y_{ij} (partner effect), b_3

is the coefficient of R_{ij} on Y_{ij} , b_4 is the actor interaction with role, b_5 is the partner interaction with role, and e_{ij} represents the residual term. The correlation between the residual scores represents nonindependence between parent and adolescent even after the effects from the interpersonal influences are controlled. If b_4 for the interaction between role and the actor variable is statistically significant, then the effect of the parent's acculturation level on his/her own perceived conflict is different from the effect of the adolescent's acculturation on the adolescent's perceived conflict. Likewise, if b_5 for the interaction between role and the partner variable is significant, then the effect of the parent's acculturation on his/her adolescent's perceived conflict is different from the effect of the adolescent's acculturation on his/her parent's perceived conflict (Cook & Kenny, 2005).

In the analyses, the main effects (two actor and two partner effects) were assessed within each of the two dimensions of acculturation (acculturation to American-oriented behaviors and cultural maintenance of Chinese-oriented behaviors) on perceived acculturation-based conflict. Possible actor-partner product score effects were explored with the Actor-Partner Interdependence Model to include product terms of parent and adolescent acculturation scores centered on the grand mean for all dyads within the sample while controlling for parent and adolescent main effects (Kenny et al., 2006). Actor-partner discrepancy scores were also included in these models to determine their associations with conflict. Therefore, six total models were conducted to assess: (1) main effects of acculturation on conflict, (2) main effects of cultural maintenance on conflict, (3) effects of the American-oriented actor-partner product score on conflict, (4) effects of the Chinese-oriented actor-partner product score on conflict, (5) effects of the American-oriented actor-partner discrepancy score on conflict, and (6) effects of the Chinese-oriented actor-partner discrepancy score on conflict.

Lastly, demographic covariates were controlled for, including age and gender of adolescent, age of parent, educational level of parent, household income, and time in the U.S. since year of immigration. Analyses were performed using multilevel modeling with SPSS v.21 for all analyses. The statistical techniques used here are described in detail by Kenny and colleagues (Kenny et al., 2006).

Results

Within parent-adolescent dyads, adolescents reported significantly higher acculturation to the broader American society than their parents ($t(186) = 10.20, p < .001$), and significantly lower cultural maintenance ($t(186) = -8.33, p < .001$). Adolescents' reports of perceived conflict with their parents were significantly higher than their parents' perceived conflict with their adolescents in a paired t -test ($t(186) = 6.08, p < .001$). Past research have also found that adolescents report greater conflict than their parents (Smetana, 1989). Pearson's correlations among adolescent and parent variables are shown in Table 1. Adolescents' acculturation to American-oriented behaviors was moderately and positively correlated with parents' acculturation. Adolescent perceived acculturation-based conflict was highly and positively correlated with parental perceived conflict.

Acculturation on Perceived Acculturation-based Conflict

For adolescents, acculturation was positively related to their own perceived conflict. At the same time, adolescents perceived less conflict the higher their parents scored on acculturation. Parents also perceived less conflict the higher their adolescents scored on acculturation (Figure 3). The parents' acculturation effect on their adolescents' perceived conflict was significantly greater than the adolescents' acculturation effect on their parents' perceptions of conflict ($\beta = -0.55$, $t(203.05) = -2.94$, $p = .004$). Therefore, parents' level of acculturation may have a greater impact on their adolescents' perceptions of conflict than in the opposite direction.

The actor-partner discrepancy score revealed that the greater the difference in parent-adolescent acculturation, the more adolescents perceived conflict. That is, if the parent-adolescent difference is one unit on the acculturation scale, then the adolescent's score for conflict is higher by 0.54 than it is for a dyad whose parent-adolescent acculturation scores are the same (see Table 2). This suggests that, holding the parents' level of acculturation constant, the higher adolescents scored on acculturation, the greater adolescents perceived conflict.

Cultural Maintenance on Perceived Acculturation-based Conflict

For both parents and adolescents, cultural maintenance was not found to be related to their own perceived conflict. However, a relationship was found whereby parents perceived less conflict the higher their adolescents scored on cultural maintenance (see Figure 4), which was highly significant. The effect of the adolescents' cultural maintenance on their own perceived conflict was significantly greater than the effect of the parents' cultural maintenance on parental perceptions of conflict ($\beta = -0.49$, $t(246.27) = -2.58$, $p = .01$). The effect of the parents' cultural maintenance on adolescent perceived conflict was significantly greater than the effect of the adolescents' cultural maintenance on parental perceptions of conflict ($\beta = 0.65$, $t(192.34) = 2.88$, $p = .004$).

The actor-partner product score revealed that it was significant for both parent and adolescent perceived conflict (see Table 2). Parent and adolescent scores were centered prior to creating these product terms (Aiken, West, & Reno, 1991). Figure 5 contains the predicted scores for dyad members who are high (i.e. one standard deviation above the mean) and low (i.e. one standard deviation below the mean) on cultural maintenance. To interpret this interaction, procedures suggested by Aiken and West (1991) were used. If a family member (actor) scores high on cultural maintenance (shown in Figure 5 as 1 *SD* above the mean for actor's Chinese-orientation), the strength of the relationship between his/her cultural maintenance and perceptions of conflict weakens as the partner also scores high on cultural maintenance (partner's orientation is 1 *SD* above the mean). If the actor's cultural maintenance is 1 *SD* below the mean, the strength of the relationship between his/her cultural maintenance and perceptions of conflict increases as the partner scores high on cultural maintenance (partner's orientation is 1 *SD* above the mean).

Discussion

While some studies have supported the conceptual models developed to explain how conflict may result from parent-adolescent acculturation gaps within immigrant families (Rasmi, Chuang, & Hennig, 2015), others have produced contradictory findings (Marsiglia, Kiehne, & Ayers, 2018). Therefore, the Actor-Partner Interdependence Model may contribute to this literature by shedding a different light or illuminating the interdependent nature of the parent and adolescent relationship, as a step toward explaining the discrepancies in the field. The findings show that adolescents perceived greater conflict the more they were acculturated but perceived less conflict the more their parents were acculturated. Parents perceived less conflict the higher their adolescents scored on both acculturation and cultural maintenance. However, parents perceived greater conflict the higher they maintained their own culture. Finally, the actor-partner discrepancy score for acculturation significantly predicted adolescent perceived conflict, and the actor-partner product score for cultural maintenance significantly predicted both parents' and adolescents' perceptions of conflict.

Results from the study partially support the first hypothesis in that adolescent acculturation was positively related to their own perceptions of conflict. This finding is supported by past research which has revealed that adolescents from immigrant families who are more American-oriented, report greater family conflict (Nair, Roche, & White, 2017; Telzer et al., 2016). One explanation is that when adolescents adopt Western-oriented behaviors and attitudes, they also adopt a greater willingness to disagree with their parents (Fuligni, 1998). In contrast, adolescents in Eastern cultures traditionally have a high degree of respect for authority and their elders and avoid questioning or defying their parents (Lee, Choe, Kim, & Ngo, 2000). At the same time, parents perceived less conflict the higher their adolescents scored on acculturation, which is in the opposite direction of what was hypothesized. Conceivably, adolescents who are not assimilating well face difficulties making friends with their peers at school, leading to stress and difficulties at home (Lim, Yeh, Liang, Lau, & McCabe, 2008; Smokowski, Rose, & Bacallao, 2010). Moreover, immigrant parents may desire their adolescents to adopt mainstream culture and even encourage it in the hopes that they will succeed in the host society (Costigan & Dokis, 2006). Immigrant parents may even view their adolescents' acculturation as an advantage because they can translate and assist their families with their daily needs (Bacallao & Smokowski, 2007).

While parents' acculturation was found to have no relationship with their own perceptions of conflict, adolescents perceived less conflict the higher their parents scored on acculturation. Parenting styles and practices change as immigrant parents adapt to the U.S. Therefore, perhaps as Chinese American parents become more acculturated, they adopt aspects of parenting from the broader society. This may include greater physical expressions of warmth and love similar to European American parents in general, or to those portrayed in the media (Kim, Im, Nahm, & Hong, 2012), which can protect against the negative effects of adolescents' perceived acculturation gaps on the parent-adolescent relationship, including conflict (Park, Vo, & Tsong, 2009).

Although no relationship was found between adolescents' cultural maintenance on their own perceived conflict, parents perceived less conflict the higher their adolescents scored on

cultural maintenance in partial support of the third hypothesis. This may be because adolescents who hold onto traditional cultural values are less inclined to challenge authority so that their parents perceive less conflict (Kwak, 2003). Research has shown that conflict among Chinese American families is commonly resolved not by open conflict, but by adolescents' avoidance, compliance despite internal conflicts, and privately disregarding their parents in order to prevent direct and escalated confrontations (Qin et al., 2012). In general, Asian American adolescents face greater difficulties communicating with their parents, and are less expressive of their concerns or opinions than their European American peers (Rhee, Chang, & Rhee, 2003).

Finally, parents' perceived conflict was positively related to their own cultural maintenance as hypothesized. A possible explanation for these findings may involve "parallel dual frames of reference" (Qin, 2006), which refers to separate and parallel comparisons of experiences between parents and their adolescents. For example, in a case study of Chinese American families, the parents were inclined to compare their adolescents' behaviors with those in their native countries or with their own experiences growing up. At the same time, adolescents compared their parents with the parents of their friends or in the media (Qin, 2006). Consequently, the parents in this study who scored higher on cultural maintenance may have greater traditional expectations from their adolescents by this comparison.

Actor-Partner Interaction Effects on Perceived Acculturation-based Conflict

Interpreting the actor-partner discrepancy score suggests that as adolescents acculturate more quickly to the mainstream culture than their parents, the acculturation gap continues to widen, leading to greater perceived conflict. Adolescents who score higher on acculturation may perceive greater conflict due to adopting the host country's behaviors, attitudes, and values. This finding is supported by prior studies among immigrant groups (Farver, Narang, & Bhadha, 2002; Tardif & Geva, 2006; Tsai-Chae & Nagata, 2008), as well as the main effect model above that showed a positive relationship between adolescent acculturation and their own perceived conflict. Regarding the actor-partner product score, parents and adolescents who scored higher on cultural maintenance perceived less conflict, but this association weakens as the other dyad member also scored higher on cultural maintenance. However, if either parent or adolescent scored lower on cultural maintenance, his/her perception of conflict increases if the other dyad member scored high on cultural maintenance. This model reveals evidence of *mutual influence*. Mutual influence occurs when two dyad members' outcomes influence each other (Kenney et al., 2006).

Contribution of Actor-Partner Interdependence Model's Partner Effects to the Literature

Past studies that have examined the acculturation gap on acculturation-based conflict or family conflict more generally, lack the direct assessment of partner effects. In summary, this study revealed three significant partner effects across two main Actor-Partner Interdependence Models: (1) adolescent's acculturation on parent perceived conflict, (2) parent's acculturation on adolescent perceived conflict, and (2) adolescent's cultural maintenance on parent perceived conflict. This suggests that parents' acculturation influences their adolescent's perceptions of conflict and vice versa. Indeed, results indicate

that parents have a greater influence on their adolescents' perceptions of conflict than in the opposite direction.

The findings suggest that partner effects reveal information that may help illuminate inconclusive and inconsistent findings in the literature about whether acculturation gaps are related to conflict. For example, Pasch and colleagues did not find the acculturation gap to be related to parent-adolescent conflict as reported by both parents and adolescents, and concluded that both parent and adolescent acculturation may independently predict conflict (2006). Using the Actor-Partner Interdependence Model, this approach can simultaneously tease out whether conflict as perceived by adolescents (or by their parents) is related to: (1) adolescents' acculturation on their own perceptions of conflict as suggested (Pasch et al., 2006), (2) parents' acculturation on adolescents' perceptions of conflict (partner effect), or (3) both of the above. Therefore, the key contribution to the literature from using the Actor-Partner Interdependence Model is the assessment of partner effects.

Due to the cross-sectional nature of the data, neither causality nor the direction of potentially causal relationships could be determined. Furthermore, a convenience sample was drawn from three elementary schools so that the parents and adolescents surveyed may not be representative of the general population of Chinese American parent-adolescent dyads.

Conclusion

Conflicts that arise from acculturating to the larger society between parents and their adolescents have significant implications on the health and well-being of adolescents from immigrant families (Lui, 2018). Unlike any other model that has been used to examine acculturation gaps on conflict, the Actor-Partner Interdependence Model can be used to help identify both actor and partner effects that may be salient and feasible to address in parent- and family-based programs. For example, the results from this study demonstrated that parents perceived less conflict when their adolescents scored higher on both acculturation and cultural maintenance. Rather, parents who scored higher on maintaining their heritage culture perceived greater conflict. The underlying reasons for this possible relationship may need to be explored and addressed as part of a family-based program. The results from this study also raise important questions about how the field is currently examining the acculturation gap-distress hypothesis among immigrant families. Accordingly, future research should use the Actor-Partner Interdependence Model to examine the interdependent nature of family dynamics, including acculturation and acculturation-based conflict, within parent-adolescent dyads.

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Figure 1.

Based on the Actor-Partner Interdependence Model where a and p represent actor and partner effects respectively (a_a is adolescent's actor effect, a_p is parent's actor effect, p_a is adolescent's partner effect, and p_p is parent's partner effect). The residuals for each outcome score is symbolized by E . Correlations between the acculturation scores and the errors are indicated by the curved arrows on each side (Kenny et al., 2006).

Figure 2.
Flow diagram of sample in final analyses

Figure 3.

Actor-Partner Interdependence Model with acculturation on perceived acculturation-based conflict adjusted for demographic variables, including age and gender of adolescent, age of parent, educational level of parent, household income, and time lived in the U.S. since year of immigration. The correlation between the parent errors and adolescent errors is 0.23 ($p=.003$). $^*p<.05$. $^{***}p<.001$.

Figure 4.

Actor-Partner Interdependence Model with cultural maintenance on perceived acculturation-based conflict adjusted for demographic variables, including age and gender of adolescent, age of parent, educational level of parent, household income, and time lived in the U.S. since year of immigration. The correlation between the parent errors and adolescent errors is 0.15 ($p=.06$). $^{***}p<.001$.

Figure 5.

Interaction effect of actor's cultural maintenance and partner's cultural maintenance on actor's perceived acculturation-based conflict within dyads, adjusted for demographic variables, including age and gender of adolescent, age of parent, educational level of parent, household income, and time lived in the U.S. since year of immigration.

Table 1

Summary of Correlations, Means, and Standard Deviations for Scores on Adolescent and Parent Acculturation, Cultural Maintenance, and Perceived Acculturation-based Conflict Variables

Measure	1	2	3	4	5	6	M	SD
1. Adolescent acculturation	–	.02	.26**	–.02	0.04	–.24**	3.39	0.76
2. Adolescent cultural maintenance		–	.08	.07	–.11	–.29**	3.45	0.68
3. Parent acculturation			–	–.18*	–.30**	–.17*	2.74	0.63
4. Parent cultural maintenance				–	.07	.12	3.94	0.50
5. Adolescent perceived conflict					–	.16**	2.55	1.47
6. Parent perceived conflict						–	1.88	0.65

* p<.05, two-tailed.

** p<.01, two-tailed.

Table 2
Actor-Partner Interaction Effects on Perceived Acculturation-based Conflict (n=187 dyads)

APIM Parameters	β	S.E.	t
<i>Acculturation</i>			
Actor X Partner Effects	-0.18 *	0.09	-2.06
Adolescent	-0.23	0.23	-0.99
Parent	-0.03	0.10	-0.25
Actor - Partner Effects	0.21 *	0.08	2.52
Adolescent	0.54 *	0.25	2.19
Parent	0.00	0.11	-0.14
<i>Cultural Maintenance</i>			
Actor X Partner Effects	-0.51 ***	0.14	-3.56
Adolescent	-0.97 *	0.38	-2.58
Parent	-0.33 *	0.16	-2.06
Actor - Partner Effects	0.25 *	0.10	2.58
Adolescent	0.15	0.28	0.51
Parent	0.12	0.12	0.98

Models adjusted for demographic variables, including age and gender of adolescent, age of parent, educational level of parent, household income, and time lived in the U.S. since year of immigration.

* p<.05.

**

p<.01.

p<.001.