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Prospective Relations between Parent-Adolescent Acculturation Conflict and Mental Health Symptoms among Vietnamese American Adolescents

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Abstract

Objectives—Intergenerational acculturation conflict in immigrant families has been implicated as a risk factor for adolescent maladjustment. However, the directionality and specific family-related mediators of this association have not been identified. The present study prospectively examined relations between adolescent reports of perceived acculturation conflict and internalizing and externalizing mental health symptoms. Perceived parent-adolescent relationship strain and perceived parental psychological control were examined as potential mediators.

Method—Survey measures were administered to 375 Vietnamese-American adolescents (48.8% males; $M = 15.55$ years, $SD = .59$) at three time points over six months.

Results—Using cross-lagged path analysis, perceived acculturation conflict predicted externalizing symptoms, whereas internalizing symptoms predicted perceived acculturation conflict. Perceived maternal psychological control mediated the association between perceived acculturation conflict and later externalizing symptoms, whereas maternal psychological control, parental unresponsiveness and unmet parent expectations mediated the association between internalizing symptoms and later acculturation conflict.

Conclusion—Culturally competent enhancement of parental sensitivity and responsiveness might be targeted as a modifiable protective factor in family-based preventive interventions for at-risk immigrant families.

Keywords

acculturation; mental health symptoms; adolescents; Vietnamese-American

The changes of adolescence prompt shifts in family relationships in navigating the balance between adolescents' need for independence and the parental role of providing support and guidance (Steinberg, 2001). This phase of family development is universal but achievement of autonomy in certain domains may differ by cultural context (Feldman & Rosenthal, 1991; Fuligni, 1998; Fuligni, 2007). For some families, it could result in strained parent-adolescent relationships which can in turn contribute to the development of adolescent mental health problems (e.g., Burt, Krueger, McGue, & Iacono, 2003; Burt, McGue, Krueger, & Iacono, 2005) including both internalizing (Sheeber, Hops, Alpert, Davis, & Andrews, 1997) and externalizing problems (Ingoldsby et al., 2006).

While intergenerational conflict may be normative, immigrant families may be particularly vulnerable to specific types of tension that arise from bicultural adaptation (Kim & Cain, 2008). Many immigrant families experience a transition from a heritage culture that emphasizes family interdependence and obligation to a society that emphasizes independence and personal autonomy (Greenfield & Cocking, 1994). *Acculturation discrepancies* arise when youth acculturate and adopt the host culture's language, norms, and values more rapidly than their parents (Birman, 2006; Herz & Gullone, 1999; Lim, Yeh, Liang, Lau, & McCabe, 2008). While some research suggests that such differences in acculturation may be normative in immigrant families and may not inevitably lead to maladjustment (Lau et al., 2005; Telzer, 2011), other studies have found acculturation discrepancies to disrupt the parent-child relationship, resulting in youth mental health symptoms (Ying 1999; Ying & Han, 2007). This posited risk process has been referred to as the acculturation gap-distress hypothesis (Kim, Chen, Wang, Shen, & Orozco-Lapray, 2013; Telzer, 2011).

Acculturation discrepancies are thought to give rise to *perceived acculturation conflict* whereby youth feel that they hold different cultural ideals or norms from their parents, especially in the areas of adolescent autonomy versus parental control and expectations of the nature of parent-child interactions (Lee, Choe, Kim, & Ngo, 2000). Perceived acculturation conflict, in turn, has been shown to generate both overt conflict and emotional distance or estrangement between parents and youth (Kim et al., 2013; Hwang & Wood, 2009; Hwang, Wood, & Fujimoto, 2010). However, empirical studies of the links between perceived acculturation discrepancies or perceived acculturation conflict and youth mental health problems have frequently relied on cross-sectional designs. Furthermore, studies using prospective designs (e.g., Ying & Han, 2007) have not established temporal precedence of the predictor-outcome relations using cross-lagged frameworks. Moreover, the intervening family processes that account for the relations between perceived acculturation conflict and adolescent mental health problems have not been fully interrogated.

Indeed, the general literature on the link between parent-adolescent relationship strain and adolescent mental health problems suggests a transactional rather than unidirectional process (Burt et al., 2005). The literature clearly implicates poor parent-child relations as a risk

factor for youth mental health problems. However, adolescent psychopathology also increases risk for conflict or estrangement between parents and adolescents. Internalizing symptoms of anxiety and depression may set the stage for poor familial relations (Cummings & Davies, 1994; Marmorstein & Iacono, 2004; Kane & Garber, 2004). For example, irritability may contribute to arguments, anhedonia, and lack of motivation may prompt negative parent attention, and rejection sensitivity may lead offspring to feel criticized or treated unfairly by parents. Similarly, symptoms of externalizing behaviors such as youth conduct problems may elicit more coercive parenting behavior as an attempt to control and reduce misbehavior, which in turn, increases discord (Schachar, Taylor, Wieselberg, Thorley, & Rutter, 1987; Pardini, Fite, & Burke, 2008; Tolan, Dodge, & Rutter, 2013). In a parallel fashion, there may be transactional relationships between perceived acculturation conflict and adolescent psychopathology in immigrant families. Indeed, prospective data from a sample of Chinese American adolescents suggests that earlier psychological adjustment is a better predictor of later parent-adolescent relationships than vice versa (Juang, Syed, & Cookston, 2012).

Certainly, perceived acculturation conflict has frequently been posited as a risk factor for both internalizing and externalizing distress among second generation youth who feel misunderstood and disconnected from their parents (Hwang et al., 2010; Kim et al., 2013), although a recent meta-analysis revealed associations were only robust between acculturation conflict and internalizing distress (Lui, 2015). Yet, the other direction of influence remains to be examined. It stands to reason that the negative affectivity associated with both internalizing problems and externalizing problems may indirectly shape teens' perceptions of a more problematic cultural disconnect from parents. Second generation adolescents with symptoms such as mood dysregulation and non-compliance may contribute to negative family interactions that are then experienced as happening within a generational and cultural divide. The present study thus explored the directionality of associations between perceived acculturation conflicts and adolescent mental health symptoms among immigrant families.

In the current study, we isolated proximal familial risk processes that may account for the prospective links between perceived acculturation conflict and later adolescent emotional and behavioral problems. One mechanism through which perceived acculturation conflict may increase risk of adolescent mental health symptoms is through strained parent-child relationships (Juang, Syed, & Takagi, 2007). As perceived acculturation conflict involves adolescents' perceptions that they and their parents hold different values, one potential outcome is that such differences are openly discussed, resulting in overt conflict involving arguments and hostility. However, values of relational hierarchy and family obligation appear to discourage open conflict in immigrant families (Fuligni, 1998). Thus, strain associated with perceived acculturation conflict may manifest in ways consistent with descriptions of "acculturative family distancing" (Hwang, 2006), a type of relationship strain that may be less overt than open conflict, but may nonetheless contribute to distress. We examine two types of relationship strain processes that may mark this distancing. First, youth may perceive that their immigrant parents are disappointed in them for not meeting culturally shaped expectations. Indeed, parents may express disappointment directly or indirectly, but this may not give rise to verbal arguments where adolescents defend or refute

parents. Second, adolescents may perceive that their parents are unresponsive to their needs for support and personal desires. Again, the resultant estrangement may not manifest in hostile discord, but may nonetheless generate distress among adolescents (Steinberg, 2001).

A second potential proximal family process that may explain the link between acculturation conflict and youth distress concerns the escalation of parental control. Asian origin parents are typically described as being higher on parental control than European-American parents (Pomerantz & Wang, 2009). Furthermore, in the context of perceived acculturation discrepancies, and discordant attitudes about adolescent autonomy versus parental authority, parents may escalate control over the adolescent to maintain family order and enculturation of traditional values (Lau, 2010). In particular, psychological control refers to reliance on tactics such as shaming, guilt induction, and withdrawal of affection, whereby parents manipulate their relationship with the child to modify child behavior (Barber, Olsen, & Shagle, 1994). Psychological control is thought to place children's emotional development at risk by thwarting autonomy and individuation, however, this strategy may be concordant with interdependent cultural contexts that socialize children to defer their personal desires and inhibit self-expression to maintain family order (Fung & Lau, 2012). Indeed, reliance on psychological control is greater in East Asian contexts than among European-Americans (Barber Stolz, Olsen, Collins, & Burchinal, 2005; Wang, Pomerantz & Chen, 2007). However, extant studies are mixed on whether parental psychological control uniformly elevates risk of child distress across Western and Eastern cultures (Barber et al, 2005; Olsen et al., 2002; Rudy & Halgunseth, 2005; Wang et al., 2007). In the current study, we examined the effect of parental exertion of psychological control in immigrant Vietnamese-American families.

Vietnamese-Americans are the fourth largest Asian-American ethnic group and are the largest refugee group to have settled in North America. Vietnamese-Americans have a lower median household income compared to other Asian American groups, including Chinese, Filipino, Indian, and Japanese Americans (Pew Research Center, 2013). Unlike other Asian-Americans who immigrated by choice, many Vietnamese-Americans fled following the Vietnam War and endured multiple sacrifices in social and economic status, family loss, and wartime and refugee trauma (Rumbaut, 2000). From 1976 through 1996, the large majority of Vietnamese immigrants to the U.S. entered as refugees and asylees and only since 1997 have most Vietnamese-Americans obtained residency through family ties (Migration Policy Institute, 2016). Therefore, the adaptation and acculturation experiences among Vietnamese-Americans may present an important context for studying familial acculturation processes.

Vietnamese-American parents share strong interdependent and collectivistic heritage values that emphasize family obligation and assistance (Phinney, Ong, & Madden, 2000), filial piety, and expectations to yield to family goals (Nguyen & Williams, 1989; Phan, 2004) with other Asian-American groups. The involuntary migration background of Vietnamese-American parents may shape strong family enculturation of these interdependent values. Seminal research has described how strong transmission of ethnic community values in Vietnamese-American families in New Orleans was associated with positive adaptation among youth (Zhou & Bankston, 1994). On the other hand, increased affiliation with non-coethnic or "Americanized" coethnic peers had negative implications for adjustment and

achievement (Bankston & Zhou, 1997). The latter conditions may set the stage for the high levels of parent-youth acculturation conflict and associated strains on family relations observed among refugee Vietnamese parents and their offspring (Ho & Birman, 2010). Thus, Vietnamese-American youth are vulnerable to intergenerational acculturation conflict experiences that may confer risk to mental health.

In the present study, our first goal was to examine the bidirectional relationships between perceived acculturation conflict and adolescent emotional and behavioral problems among Vietnamese-American youth. We hypothesized that Vietnamese-American adolescents' perceptions of acculturation conflict would prospectively relate to internalizing and externalizing symptoms. Unlike previous studies, we scrutinized whether this prospective relationship would hold while also modeling potential transactional relations between acculturation conflict and adolescents' internalizing and externalizing symptoms over time as well as their concurrent associations. Within a short-term prospective study over a 6-month follow-up period, we aimed to establish temporal precedence among the processes under study rather than indexing developmental change over time. Second, we examined two plausible mediators of the link between perceived acculturation conflict and later mental health problems—parent-adolescent relationship strain (i.e., unmet parental expectations and lack of parental responsiveness) and parental psychological control. Our models also afforded the opportunity to explore whether any potential prospective links between earlier adolescent behavior problems and later perceived acculturation conflict might also be mediated by these intervening variables.

Method

Participants and Procedure

The sample for the present study was drawn from a larger study examining cultural variations in stress experiences, coping, and the mental health of Vietnamese, Vietnamese-American, and European-American adolescents. Over the course of three academic years from 2011 to 2014, three different cohorts of Vietnamese-American and European-American adolescents in the 10th and 11th grade were recruited for the larger study. In each academic year, a new cohort of students was recruited and followed from October to May with three data collection points scheduled three months apart. A total of 10 ethnically diverse public high schools in California participated in the study. The schools varied widely in ethnic composition from 1.7% to 59.6% identifying as European-American, 8.1% to 76.0% as Asian-American, and 14.5% to 57.1% as Latino. European-Americans were the largest ethnic group in three schools, Asian-Americans were the largest group in four schools, and Latinos were the largest group in three schools. The schools were socioeconomically diverse, with low-income students (i.e., students qualifying for a free or reduced lunch) representing 12% to 77% of the student body across schools.

During study recruitment, research assistants and/or teachers made brief announcements in classrooms to describe the study and distribute consent packets. At schools with fewer eligible students, adolescents were invited by email to attend a study information session. Small incentives were provided to students who returned the forms regardless of their decision to participate and the classrooms with the highest return rates received a pizza

party. Among the 5,035 students who returned their consent packets, 1,937 (38.5%) declined participation, 3,098 (61.5%) students expressed interest in participating, and 896 (17.8%) were found to be ineligible (i.e., ethnicities other than Vietnamese-American or European-American). In total, 2,202 students who provided parental consent and adolescent assent were eligible for participation. Among the eligible student, male and European-American students were oversampled because Asian-American females volunteered to participate at a higher rate than other groups. Thus, in the main study, 1,549 adolescents ($M = 15.6$ years; $SD = .63$) were selected and invited to complete a baseline survey. Of the resulting sample, 876 (56.6%) self-reported as Vietnamese-American, 494 (31.9%) as European-American, 116 (7.5%) as Hispanic/Latino¹, 36 (2.3%) as multiracial, 20 (1.3%) as from other racial/ethnic groups, and 7 (.5%) did not state their ethnicity.

A subset of participants in the baseline (T1) survey sample was invited to participate in the prospective study that involved repeated survey and life stress interview assessments at Time 2 (T2; 3 months post-baseline) and Time 3 (T3; 6 months post-baseline). The prospective sample was chosen through a randomized stratified sampling selection procedure to balance gender and ethnicity across the target groups and to reduce the skew of the distribution for stressful life events as assessed by the Adolescents Life Events Questionnaire (ALEQ; Hankin & Abramson, 2002). Participants were compensated with \$20 gift cards for the baseline survey and \$25 gift cards for each follow-up assessment. All procedures were approved by the university's Institutional Review Board.

The present study focused on the survey data of 375 Vietnamese-American participants in the prospective sample (48.8% male). The 10th and 11th grade participants were mostly 15 to 17 years of age ($M = 15.55$ years, $SD = .59$). A total of 14 participants were 14 years old at the baseline assessment. At Time 2, 357 (95.2%) participants completed the follow-up survey and at Time 3, 334 (89.1%) participants completed the final follow-up survey. Of the total 375 participants, 322 (85.9%) participated at all three time points and all available data were used for analyses. Of the participants reporting nativity, 295 (78.7%) participants were born in the U.S. (with at least one parent born in a foreign country) and 74 (19.7%) were born outside the U.S. Most of the participants' parents were immigrants (98.4%) and 266 (70.9%) of the participants' parents were married. Of the participants who were aware of their parents' educational background, 120 (32.0%) fathers and 95 (25.3%) mothers completed college or higher, and 207 (55.2%) fathers and 189 (50.4%) mothers held full time employment (see Table 1).

Measures

Perceived acculturation conflict—Participants completed the 10-item Asian American Family Conflict Scale (AAFCS; Lee, Choe, Kim, & Ngo, 2000) to assess perceived parent-child acculturation conflict. The frequency or likelihood of common intergenerational cultural disagreements (e.g., “You want to state your opinion, but your mother considers it to be disrespectful to talk back.”) were rated on a 5-point Likert-type scale (1 = *Almost never* to 5 = *Almost always*). The likelihood of each acculturation conflict was assessed rather than

¹Although not part of the study design, these students were included because administrators in two schools required that we extend the research opportunity to all students regardless of ethnicity.

the seriousness because the likelihood scale has been found to be better measure of Asian-American parent-child relationship, with high internal consistency and criterion validity (Lee, Choe, Kim, & Ngo, 2000; Juang, Syed, & Takagi, 2007; Tsai-Chae & Nagata, 2008). In the current sample, the AAFCS had good internal consistency ($\alpha = .88$ at T1, $\alpha = .90$ at T3), and good 6-month test-retest reliability, $r(326) = .70, p < .001$.

Internalizing and externalizing symptoms—Participants completed the Youth Self Report (YSR; Achenbach & Rescorla, 2001) to assess internalizing and externalizing symptoms. The 112-item YSR assesses emotional and behavioral disturbance experienced by adolescents over the last 6 months, rated on a 3-point scale (0 = *Not true*, 1 = *Somewhat or Sometimes true*, or 2 = *Very true/Often true*). The internalizing scale is comprised of 25 items from the “Withdrawn/Depressed”, “Somatic Complaints”, and “Anxious/Depressed” narrowband scales. The externalizing scale includes 32 items from the “Rule Breaking Behavior”, and “Aggressive Behavior” narrowband scales. The YSR has strong reliability and validity across numerous cultural groups (de Groot, Koot, & Verhulst, 1996). In the current sample, the internalizing scale ($\alpha = .89$) and externalizing scale ($\alpha = .85$) had good internal consistency.

Perceived parental psychological control—Participants completed a 10-item measure of perceived maternal and paternal psychological control (e.g., “My mother avoids looking at me when I have disappointed her.”) from Wang, Pomerantz, and Chen’s (2007) perceived psychological control measure. While the majority of studies examining parental psychological control have explored a composite parental psychological control variable or solely examined maternal psychological control, the current study examined perceived psychological control of mothers and fathers as two separate potential mediators given previous research associating maternal and paternal parenting differences to discriminant child outcomes (Bean, Bush, McKenry, & Wilson, 2003; McKinney & Renk, 2008). About 87.7% ($n = 329$) of the participants responded to both the maternal and paternal psychological control scales. For the current study, internal consistency was high for both perceived maternal and paternal psychological control ($\alpha_{\text{mother}} = .89, \alpha_{\text{father}} = .92$). Three-month test-retest reliability was also high for both perceived maternal, $r(349) = .73, p < .001$, and paternal psychological control, $r(325) = .73, p < .001$.

Relationship strain—Participants completed a modified version of the Adolescents Life Events Questionnaire (ALEQ; Hankin & Abramson, 2002). Of the 78 items assessing the occurrence of negative life events relating to six domains (family, peers, school, romantic, neighborhood/safety, discrimination); six items assessing to family interpersonal conflict were included in the present study. For each sample life event, participants indicated whether the event occurred and then rated the level of stress experienced as a result of the event on a 5-point Likert-type scale (0 = *Not stressful* to 4 = *Very stressful*). Two scales were derived to assess the occurrence of stressors related to parent-adolescent relationship strain: (a) stressors involving *Unmet Parental Expectations* (3 items; e.g., “Your parents were upset with you because you hadn’t lived up to their standards.”); (b) events in which adolescents perceived their parents as *Unresponsive or uncaring* (3 items; e.g., “Your parents did something that made you feel like they did not respect or love you, or they weren’t interested

in you.”). For each item, both the occurrence and stress rating were taken into account in scoring the scales. Items that were not endorsed (did not occur) were assigned a score of ‘0’ as were items that were endorsed (event occurred) but were rated as 0 for “not stressful”. All other stress ratings were similarly retained as scores for endorsed items (1 to 4). A confirmatory factor analysis with the prospective Vietnamese-American sample ($n = 356$) for this 2-factor model of relationship strain related to parent unresponsiveness and unmet parental expectations was good as indicated by model fit indices of CFI = .99, TLI = .98, RMSEA = .05, SRMR = .02, and all standardized factor loadings above .43. For the purposes of the confirmatory factor analysis, errors of two of the three items within the unmet parent expectations subscale were correlated with one another and errors of all three items of the unresponsiveness subscale were correlated with one another to produce the reported fit indices. Three-month test-retest reliability for unresponsiveness was $r(355) = .52$, $p < .001$, and for unmet parent expectations was $r(355) = .59$, $p < .001$.

Data Analyses

We first examined the direct relations between acculturation conflict and externalizing and internalizing symptoms using cross-lagged models. Then, we conducted path analyses to identify specific family process mediators. For each of the two cross-lagged models, two mediational models were fit: one model with perceived maternal and paternal psychological control, and another model with the two family strain variables as potential mediators. This produced a total of four mediational models. Path analyses were conducted using Mplus 6.12 (Muthén & Muthén, 2011). Full information maximum likelihood (FIML) estimation was used to allow for all observations (including those with missing time points or missing specific measures) to be included in the analyses. Model fit was evaluated by conventional cutoffs: .95 for Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), .08 for Standardized Root Mean Squared Residual (SRMR); and .06 for Root Mean Squared Error of Approximation (RMSEA) (Hu & Bentler, 1999). Across all models, adolescent gender and maternal education were included as covariates to control for established correlates of study variables.

Results

Preliminary Analyses

Table 2 lists means, standard deviations, medians, minimums, maximums, kurtosis, and skew of study variables. Table 3 presents correlations between study variables.

Missing Data

Attrition analyses indicated that there were no significant differences on any of the demographic variables between participants who participated at T2 and at T3 and those who did not. However, adolescents who participated at T3 reported higher levels of internalizing symptoms at baseline ($M = 20.66$, $SD = 10.17$, versus $M = 16.81$, $SD = 8.08$; $t[362] = 2.08$, $p = .039$) and at Time 2 ($M = 18.27$, $SD = 10.13$, versus $M = 14.59$, $SD = 8.44$; $t[354] = 1.99$, $p = .048$) than participants who did not participate at T3. No other differences were significant.

Non-Mediated Longitudinal Cross-Lagged Models

The first set of models assessed direct relations (i.e., without mediators) between perceived acculturation conflict and mental health symptoms. In the first model, perceived acculturation conflict at T1 predicted significantly higher levels of externalizing mental health symptoms ($\beta = .08, p = .046$) at T3. The cross-lagged path of T1 externalizing symptoms predicting perceived acculturation conflict at T3 was not significant ($\beta = .01, p = .89$). The model provided a good fit to the data, with CFI = .99, TLI = .96, RMSEA = .06, and SRMR = .04 (Hu & Bentler, 1999; Hooper, Coughlan & Mullen, 2008). In the second model, which focused on internalizing mental health symptoms, perceived acculturation conflict at T1 was not a significant predictor of internalizing symptoms at T3 ($\beta = -.01, p = .81$), but T1 internalizing symptoms significantly predicted higher levels of perceived acculturation conflict at T3 ($\beta = .09, p = .036$), with good model fit (CFI = .99, TLI = .97, RMSEA = .05, SRMR = .03).

Mediation Models

Path analysis models with multiple mediators were conducted to identify specific family process mediators. Perceived parental psychological control and family relationship strain variables were included as two separate sets of multiple mediators into each cross-lagged model.

Externalizing mental health symptoms models—In the first mediation model with externalizing symptoms as the outcome variable, perceived psychological control of fathers and mothers were examined as potential mediators of the prospective relation between perceived acculturation conflict at T1 and externalizing symptoms at T3 (Figure 1a). Perceived acculturation conflict at T1 predicted significantly higher levels of perceived paternal psychological control ($\beta = .40, p < .001$) and perceived maternal psychological control ($\beta = .54, p < .001$) at T2. However, only perceived maternal psychological control predicted significantly higher levels of externalizing symptoms at T3 ($\beta = .10, p = .043$). In this model, the direct path from T1 perceived acculturation conflict to T3 externalizing symptoms was no longer significant, suggesting full mediation. The total indirect path of perceived acculturation conflict on externalizing symptoms was significant ($\beta = .07, p = .013$) as was the specific indirect effect through T2 perceived maternal psychological control ($\beta = .05, p = .046$). As found previously, the direct path from T1 externalizing symptoms to T3 perceived acculturation conflict was not significant, and the total and specific indirect effects were not significant. Externalizing symptoms at T1 did not predict adolescent perceptions of parental psychological control at T2. However, perceived paternal psychological control ($\beta = .10, p = .021$) and perceived maternal psychological control ($\beta = .29, p < .001$) was a significant predictor of T3 perceived acculturation conflict. This model showed good fit to the data, with CFI = .99, TLI = .98, RMSEA = .04, SRMR = .03.

In the second mediation model of this set, family relationship strain variables were examined as potential mediators. Perceived acculturation conflict at T1 significantly predicted perceptions of parents as being unresponsive ($\beta = .29, p < .001$) and tensions related to unmet parent expectations ($\beta = .41, p < .001$) (see Figure 1b). However, none of the two family relationship strain variables predicted higher levels of T3 externalizing symptoms and

none of the specific indirect effects were significant. Thus, no family relationship strain variables were identified as significant mediators. T1 externalizing symptoms were a significant predictor of perceived parental unresponsiveness ($\beta = .17, p = .002$) but not of unmet parent expectations at T2. Furthermore, parental unresponsiveness ($\beta = .14, p = .002$) and unmet parent expectations ($\beta = .12, p = .019$) at T2 were significant predictors of higher levels of perceived acculturation conflict at T3. The total indirect effect of externalizing symptoms at T1 on perceived acculturation conflict at T3 was significant ($\beta = .04, p = .009$) as was the specific indirect path through parental unresponsiveness ($\beta = .02, p = .030$). This model provided good fit to the data, with CFI = .97, TLI = .91, RMSEA = .08, and SRMR = .05.

Internalizing mental health symptoms models—As depicted in Figure 2a, perceived paternal and maternal psychological control were examined as potential mediators of the prospective relation between internalizing mental health symptoms at T1 and perceived acculturation conflict at T3. Internalizing symptoms at T1 predicted higher levels of perceived maternal psychological control at T2 ($\beta = .13, p = .006$), but was not related to perceived paternal psychological control at T2. Both perceived paternal psychological control at T2 ($\beta = .10, p = .024$) and perceived maternal psychological control at T2 ($\beta = .29, p < .001$) were significant predictors of T3 perceived acculturation conflict. The direct path from T1 internalizing symptoms to T3 perceived acculturation conflict was no longer significant with the mediators in the model. The total indirect effect of T1 internalizing symptoms on T3 perceived acculturation conflict was significant ($\beta = .05, p = .007$), as was the specific indirect effect through perceived maternal psychological control ($\beta = .04, p = .012$). No other specific indirect effect was significant. Thus, perceived maternal psychological control was identified as a mediator. As found previously, the direct path from perceived acculturation conflict at T1 to internalizing symptoms at T3 was not significant, but perceived acculturation conflict at T1 was a significant predictor of perceived paternal psychological control ($\beta = .36, p < .001$) and perceived maternal psychological control ($\beta = .50, p < .001$) at T2. None of the perceived psychological control variables were significant predictors of internalizing symptoms at T3. The total and specific indirect effects of T1 acculturation conflict on T3 internalizing symptoms were not significant. The overall model provided good fit to the data, with CFI = 1.00, TLI = .99, RMSEA = .03 and SRMR = .03.

In the last multiple mediational model, family relationship strain variables were examined as potential mediators (Figure 2b). Internalizing symptoms at T1 significantly predicted parental unresponsiveness ($\beta = .30, p < .001$) and unmet parent expectations at T2 ($\beta = .23, p < .001$). Both perceptions of parents as unresponsive ($\beta = .13, p = .006$) and tensions involving unmet parent expectations ($\beta = .11, p = .027$) at T2 predicted higher levels of perceived acculturation conflict at T3. In this model, the direct path from T1 internalizing symptoms to T3 perceived acculturation conflict was no longer significant but the total indirect effect was significant ($\beta = .07, p < .001$) as was the specific indirect effect through parental unresponsiveness ($\beta = .04, p = .013$) and unmet parent expectations ($\beta = .03, p = .045$). Therefore, both are significant mediators. As found previously, the direct path from T1 perceived acculturation conflict to T3 internalizing symptoms path was not significant but T1 perceived acculturation conflict predicted perceptions of parents as unresponsive ($\beta = .$

23, $p < .001$) and unmet parent expectations stressors at T2 ($\beta = .36, p < .001$). However, only perceived parental unresponsiveness at T2 predicted significantly higher levels of internalizing symptoms at T3 ($\beta = .17, p < .001$). The total indirect effect ($\beta = .04, p = .021$) and the specific indirect effect through parental unresponsiveness ($\beta = .04, p = .007$) were significant; no other specific indirect effect was significant. The model provided good fit, with CFI = .99, TLI = .96, RMSEA = .06, and SRMR = .03.

Discussion

The present study identified several pathways between perceived acculturation conflicts and youth mental health symptoms. Although from an absolute perspective the magnitude of these effects is relatively small, it is important to consider that these effects emerged in the context of the general stability of the outcomes assessed within a short-term follow-up period. Perceived acculturation conflict, internalizing symptoms, and externalizing symptoms were all stable to highly stable in our sample across six months, and when the proportion of change-related variance in the T3 variables is considered, the conceptual significance of the effects in predicting change in our outcomes is compelling.

Overall, we found evidence that perceived acculturation conflicts between parents and youth are associated with risk of later externalizing behavior problems but not with internalizing symptoms among Vietnamese-American adolescents. This does not align with findings from the Lui (2015) meta-analysis, which revealed a non-significant mean effect of intercultural conflict on externalizing problems but a small effect size on internalizing problems. However, the bulk of previous studies have relied on cross-sectional analyses, retrospective reports among young adults, or on prospective analyses that did not model cross-lagged associations (e.g., Ying & Han, 2007). Within our externalizing model, examination of indirect effects via plausible intervening variables suggested that higher levels of externalizing problems were attributable, at least in part, to perceptions of mothers' psychological controlling practices including shaming, criticism, and invalidation. Discrepant attitudes about adolescent autonomy versus parental authority may be associated with maternal attempts to heighten control over adolescent behavior through means that leverage the emotional valence within the mother-child relationship. This, in turn, may result in the adolescent further rejecting parental authority through defiance, risk-taking, and other externalizing behaviors. This process has been described by scholars examining the acculturation gap-distress hypothesis within studies of perceived acculturation conflict, and mother- and youth-reported acculturation discrepancies (Kim et al., 2013; Telzer, 2011; Hwang, Wood, & Fujimoto, 2010).

Our models examining internalizing mental health outcomes showed a different pattern. Rather than baseline acculturation conflict predicting internalizing symptoms, baseline internalizing symptoms predicted higher levels of perceived acculturation conflict at the six-month follow-up. While prior cross-sectional studies have found relations between internalizing symptoms and perceived acculturation conflicts in immigrant families (Hwang, Wood, & Fujimoto, 2010; Choi, He, & Harachi, 2008), temporal precedence was not firmly established. One potential explanation for this direction of influence is that internalizing symptoms, and depressive symptoms in particular, result in interpersonal stress generation

(Davila, Hammen, Burge, Paley, & Daley, 1995), which includes processes of self-criticism and withdrawal. Our mediation analyses suggested that the association between baseline internalizing symptoms and later acculturation conflicts was mediated by adolescents' perceptions of parental unresponsiveness, unmet parent expectations and perceived maternal psychological control during the follow-up period. Of note, externalizing symptoms did not predict later perceptions of acculturation conflict. This may be surprising given that disruptive behaviors seem particularly likely to generate intergenerational tensions in the context of a Confucian-influenced heritage. One possible explanation is that the youth may have engaged in more covert externalizing symptoms (e.g., lying, truancy) that remain unknown to parents.

Across the models, it was notable that there was robust mediation via perceived maternal psychological control but not perceived paternal psychological control. Such is the case with many studies that include adolescent perceptions of both maternal and paternal parenting (e.g., Williams & Kelly, 2005). Indeed, specifically within Asian American families, mothers are often touted as being responsible for in-home socialization and thereby are often more salient contributors to younger adolescents' perceptions of their parents (Kim, Wang, Orozco-Lapray, Shen, & Murtuza, 2013). It would be premature to conclude that fathers are not involved in this process as previous data suggest that Vietnamese-American fathers are perceived by their children as practicing coercive parenting, which is in turn associated with distress (Nguyen, 2008). Additionally, previous research suggests that perceived mothers and fathers' psychological control play discriminant roles in youth development depending on the youth outcome being studied. For instance, previous research with Chinese samples has shown that while maternal psychological control and not paternal psychological control significantly predicted adolescent self-esteem, paternal psychological control uniquely predicted life satisfaction (Shek, 2007). However, the literature does suggest a tradition of patriarchy in Vietnamese culture with gender roles emphasizing the centrality and strength of women in family and public life (Abrams, Javier, Maxwell, Belgrave, & Nguyen, 2016; Do & Brennan, 2015) and this relatively dominant mothering role may account for the stronger effects observed in the current study.

The identified mediators of perceived maternal psychological control and perceived parental unresponsiveness share a common element of parent-driven control and insensitivity to the feelings and views of adolescents. Psychological control, in particular, has been described as consonant with interdependent cultural traditions in Vietnamese and East Asian family structures, and in some studies the negative effects of psychological control on youth have been shown to be attenuated in those national contexts (e.g., Fung & Lau, 2012; Rudy & Halgunseth, 2005). However, there are also multiple studies showing uniformly negative child emotional outcomes as function of psychological control in Asian and Asian American families (e.g., Chao & Aque, 2009; Wang, Pomerantz, & Chen, 2007). The boundary conditions on the deleterious effects of perceived parental psychological control require further study, but it may be that the effects may be pernicious among youth in bicultural families navigating family acculturation dissonance. In immigrant families, youth expectations for autonomy within the larger societal context may increase risk associated with perceived parental psychological control even when shaped by heritage cultural traditions.

Together, the findings of the present study suggest that culturally competent enhancement of parental sensitivity and responsiveness to adolescents might be a modifiable protective factor in family-based preventive interventions for at-risk immigrant families. For instance, it may be beneficial for immigrant parents to gain exposure to active listening strategies for responding to adolescents' bids for autonomy and/or expressions of distress. This would not necessarily translate to the granting of more autonomy, but would encourage a more open exchange of concerns and motives underlying parental rules and expectations.

Relatedly, our findings in the internalizing models may also suggest that immigrant parents may be less likely to detect and correctly interpret internalizing symptoms in their children (Lau et al., 2004), and acculturation conflict may further decrease the likelihood that parents will perceive child distress (Fung & Lau, 2010). Instead, Vietnamese-American parents may misinterpret adolescent symptoms of withdrawal, irritability, or dysphoria as a show of disrespect or a lack of interest in the family. Parents may consequently respond by rebuking or criticizing the youngster, thereby invalidating the adolescent's distress. This characterization stands in contrast to previous descriptions giving causal precedence to acculturative family distancing precipitating depression among adolescents in immigrant families (e.g., Hwang, Wood, Fujimoto, 2010; Ying & Han, 2007).

The limitations of the study should be considered. First, a longer timeframe beyond six months might have been useful for determining whether the intergenerational disputes over adolescent autonomy predict beyond middle or late adolescence. Second, the study was based on adolescents' self-reports and did not include parents or other informants. Although adolescents have the most direct access to their own internal beliefs and affect, it would be useful for future research to include parents to obtain their perspective on family relationship factors. Third, our family relationship stress measure was limited and future research would benefit from the use of more elaborate previously validated scales to better tease apart these distinctive family processes. Finally, we intentionally focused our analyses on specific cultural constructs rather than comparisons of ethnic group differences in order to increase the generalizability of our results. Although Vietnamese-American adolescents represent an important, understudied population in their own right, it is possible that untested complex interactions restrict the generalizability of our results. Overall, the present study may increase our understanding of how intergenerational conflict among immigrant families is linked to adolescent psychopathology.

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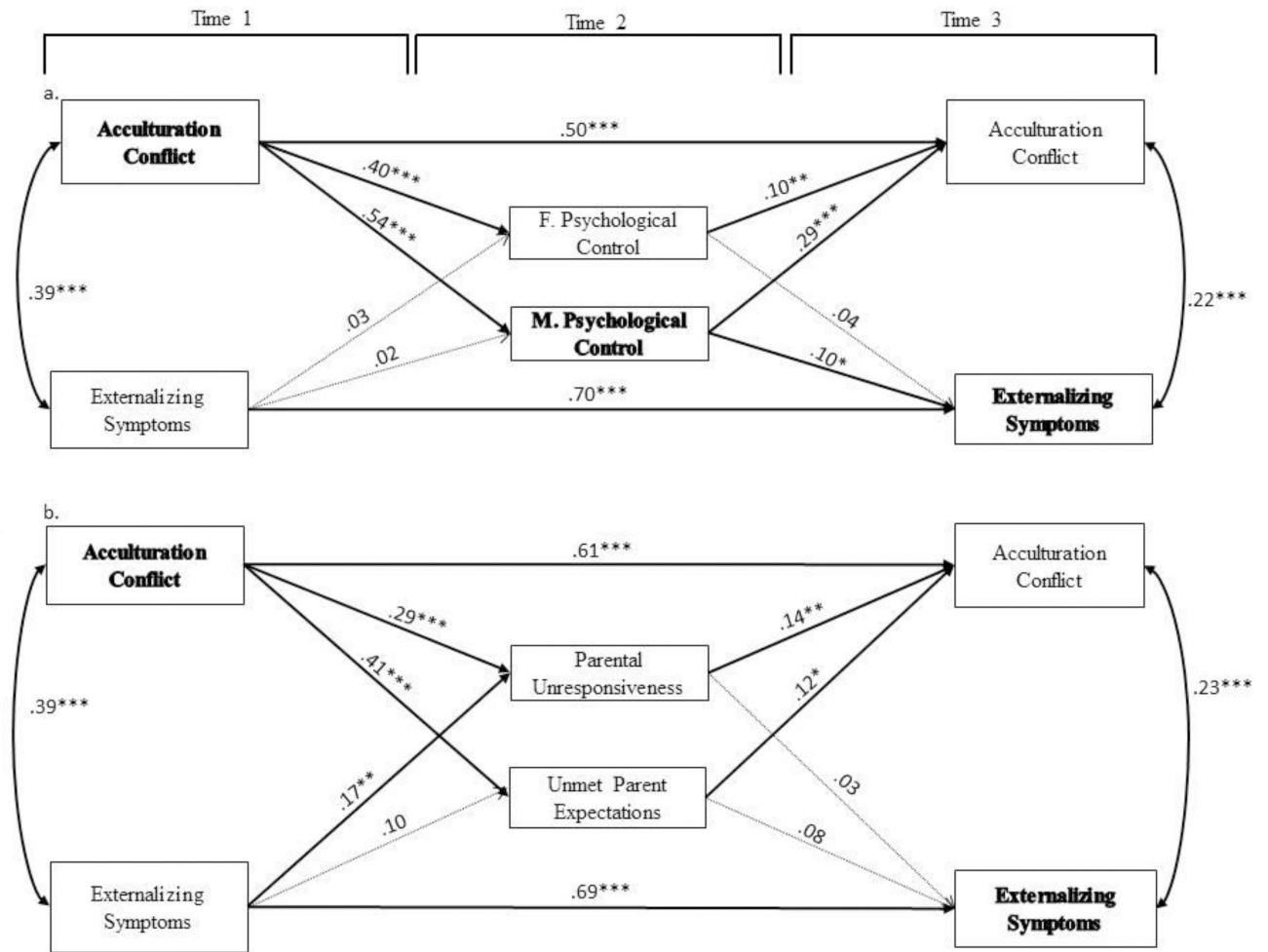


Figure 1. Mediators of the prospective association between acculturation conflict and externalizing symptoms.

Note. Standardized coefficients are reported. * $p < .05$, ** $p < .01$, *** $p < .001$. F = adolescents' report on father's parenting, M = adolescents' report on mother's parenting. Fit indices: Figure 2a: CFI = .99, TLI = .98, RMSEA = .04, SRMR = .03; Figure 2b: CFI = .97, TLI = .91, RMSEA = .08, SRMR = .05.

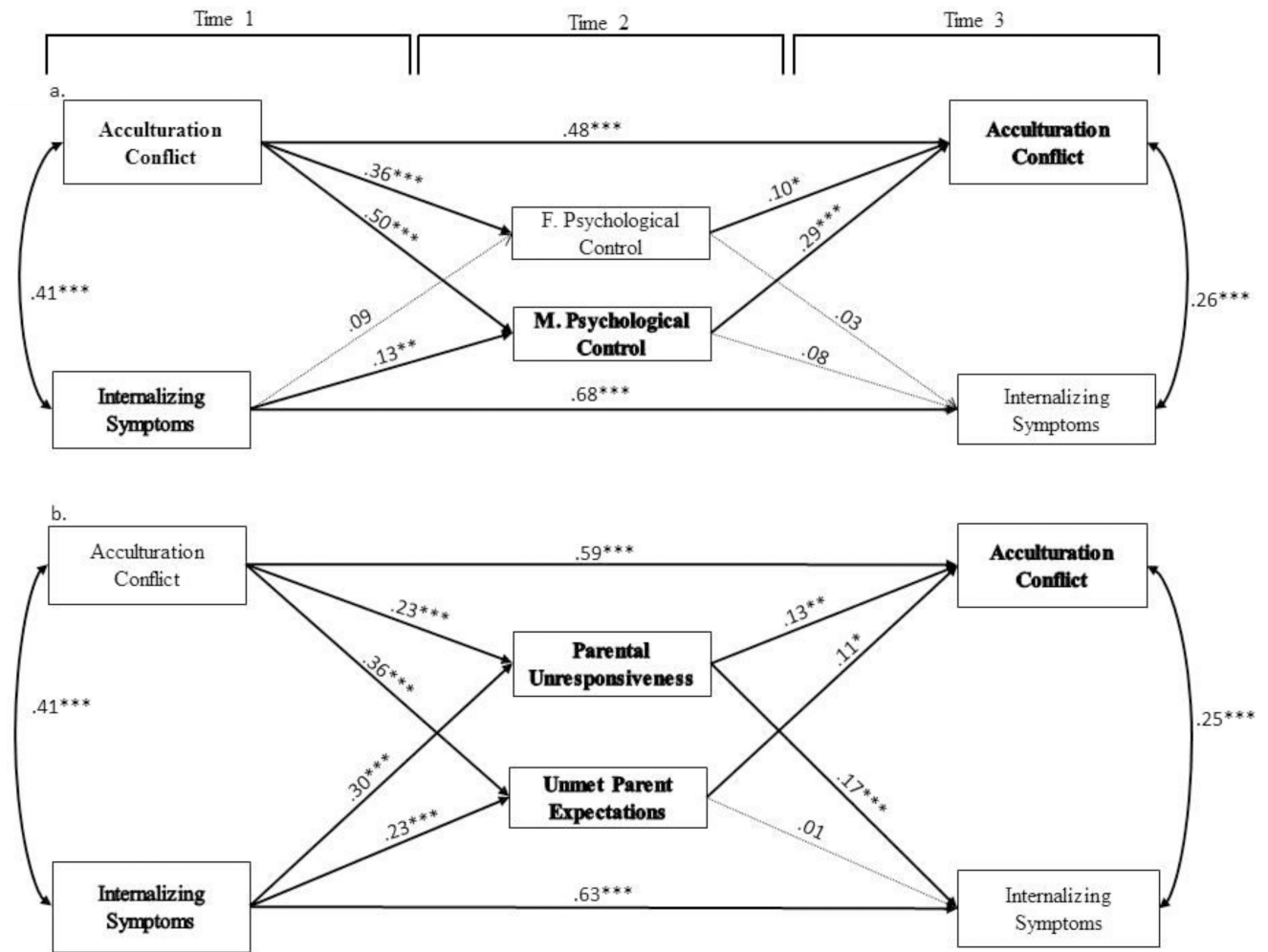


Figure 2. Mediators of the prospective association between internalizing symptoms and acculturation conflict.

Note. Standardized coefficients are reported. * $p < .05$, ** $p < .01$, *** $p < .001$. M = adolescents' report on mother's parenting, F = adolescents' report on father's parenting. Fit indices: Figure 3a: CFI = 1.00, TLI = .99, RMSEA = .03, SRMR = .03; Figure 3b: CFI = .99, TLI = .96, RMSEA = .06, SRMR = .03.

Table 1

Participants demographics

	Time 1 (N = 375)	Time 2 (N = 357)	Time 3 (N = 334)
Gender (<i>male</i>)	183 (48.5%)	170 (47.6%)	162 (48.5%)
Age	15.55 (.59)		
U.S. Born	295 (78.7%)		
Foreign Born	74 (19.6%)		
Immigrant Parent(s)	369 (98.4%)		
Married Parents	266 (70.9%)		
	Father	Mother	
Parent Education			
<i>11th grade or below</i>	35 (9.3%)	53 (14.1%)	
<i>High School degree</i>	54 (14.4%)	69 (18.4%)	
<i>Some College or Vocational school</i>	58 (15.5%)	54 (14.4%)	
<i>College or Vocational degree</i>	84 (22.4%)	68 (18.1%)	
<i>Professional degree</i>	36 (9.6%)	27 (7.2%)	
<i>Don't Know or Does not apply</i>	101 (26.9%)	101 (26.9%)	
Parent Employment			
<i>Full time job</i>	207 (55.2%)	189 (50.4%)	
<i>Part-time job</i>	30 (8%)	58 (15.5%)	
<i>Unemployed & job searching</i>	39 (10.4%)	30 (8%)	
<i>Unemployed & not searching</i>	17 (4.5%)	62 (16.5%)	
<i>retired</i>	13 (3.5%)	2 (.5%)	
<i>Don't Know or Does not apply</i>	63 (16.8%)	31 (8.3%)	

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Table 2

Descriptive statistics of study measures.

	Mean(SD)	Median	Min.	Max.	Kurtosis		Skewness	
					Estimate	S.E.	Estimate	S.E.
1.T1Fam Conflict	3.32(.96)	3.40	1	5	-.73	.252	-.21	.127
2.T3Fam Conflict	3.20(1.03)	3.20	1	5	-.79	.268	-.16	.134
3.T1External Sx	13.17(7.32)	12.00	0	45	1.28	.252	.87	.126
4.T3External Sx	12.28(7.67)	11.00	0	41	.42	.266	.77	.134
5.T1Internal Sx	20.29(10.00)	19.00	1	51	-.09	.252	.45	.126
6.T3Internal Sx	17.06(10.47)	16.00	0	53	.41	.266	.73	.134
7.T2MPsyControl	3.23(1.00)	3.22	1	5	-.87	.259	-.06	.130
8.T2FFPsyControl	2.85(1.11)	2.85	1	5	-.93	.266	.16	.134
9.T2Unresponsive	.82(.98)	.33	0	1	.63	.257	1.19	.129
10.T2UnmetParentExpect	1.42(1.26)	1.33	0	1	-1.06	.257	.43	.129

Note. T = time point, Fam = family, Sx = symptoms, M = adolescents' report on mother's parenting, F = adolescents' report on father's parenting, Psy = psychological, Expect = expectations.

Table 3

Bivariate Correlations of study measures

	1	2	3	4	5	6	7	8	9	10	11	12
1.T1Fam Conflict	-											
2.T3Fam Conflict	.70***	-										
3.T1External Sx	.39***	.27***	-									
4.T3External Sx	.35***	.37***	.74***	-								
5.T1Internal Sx	.41***	.38***	.44***	.33***	-							
6.T3Internal Sx	.30***	.40***	.32***	.50***	.69***	-						
7.T2MPsyControl	.56***	.62***	.24***	.30***	.35***	.29***	-					
8.T2FFPsyControl	.40***	.44***	.18**	.21***	.25***	.22***	.46***	-				
9.T2Unresponsive	.36***	.43***	.28***	.29***	.40***	.42***	.41***	.24***	-			
10.T2UnmetParentExpect	.46***	.47***	.26***	.30***	.38***	.35***	.47***	.34***	.58***	-		
11.Gender	.12*	.09	.12*	.05	.30***	.26***	.11*	.03	.22***	.16***	-	
12.Motheredu	.02	.08	.06	.14*	.08	.09	.07	.04	.09	.12*	-.16**	-

Note. T = time point, Fam = family, Sx = symptoms, M = adolescents' report on mother's parenting, F = adolescents' report on father's parenting, Psy = psychological, Expect = expectations, edu = education.

* $p < .05$

** $p < .01$

*** $p < .001$.