

**Family Contextual Influences on Bicultural Competence Development
Among U.S. Mexican-Origin Youths**

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Abstract

This study investigated how parents' value-based enculturation and acculturation processes (i.e., Mexican American and mainstream American values trajectories across their youths' development from late childhood to middle adolescence) related to their youths' behavioral, affective, and cognitive components of bicultural competence in late adolescence. Sample included 749 U.S. Mexican-origin youths (30% Mexico-born; 49% female), and their parents, followed for 7 years ($M_{\text{age}} = 10.44$ to 17.38 years). Linear latent growth analyses revealed that both parental enculturation and acculturation processes have important implications for U.S. Mexican-origin adolescents' bicultural competence. This work highlights parental promoting and inhibiting influences on the development of bicultural competence, a normative developmental competency among ethnic-racial minority and immigrant adolescents.

Keywords: Biculturalism, Family, Adolescents, Acculturation, Enculturation, Values

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Given the continued racial, ethnic, and cultural diversification of the United States (U.S. Census Bureau, 2018) and many other countries (United Nations, 2017), developmental research on *biculturalism* is needed. *Bicultural* individuals have internalized two cultural knowledge systems (e.g., heritage and host; Benet-Martinez, Leu, Lee, & Morris, 2002) and developed *bicultural competence*, the ability to function successfully within bicultural contexts (LaFromboise, Coleman, & Gerton, 1993). Though bicultural competence is a normative developmental competency among ethnic-racial minority and immigrant adolescents (Safa et al., 2018), little is known about family processes that promote or inhibit its development. This gap is especially problematic in the developmental period spanning late childhood to late adolescence, across which youths are gaining increasing cognitive abilities (Arnett, 2014) that support comprehension of complex, culturally situated demands associated with different cultural systems (Knight, Safa, & White, 2018).

We examined how parental *value-based enculturation and acculturation* processes, or processes of adapting to values from the heritage and host cultures, respectively, related to the development of adolescents' behavioral, affective, and cognitive components of bicultural competence among a sample of U.S. Mexican-origin families. Enculturation and acculturation processes involve adaptation across multiple cultural domains, including affiliations, attitudes, behaviors, beliefs, knowledge, and values (Kim & Abreu, 2001; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). We focused on values because rates of change vary across cultural domains (Lee et al., 2018; Schwartz et al., 2010) and values are central to parents' internalized cultural models that shape their parenting goals, beliefs, and practices (Bornstein & Cote 2006;

Super & Harkness, 1986; Weisner, 2002). First, we identified parents' trajectories of endorsement of values associated with the heritage culture (value-based enculturation) and with the host culture (value-based acculturation). We investigated how parents' value-based enculturation and acculturation processes (i.e., values trajectories across their youths' development from late childhood to middle adolescence) related to their youths' bicultural competence in late adolescence. Given emerging research documenting differences in how mothers and fathers socialize and influence youths (Cabrera, & Leyendecker, 2017), we examined the influence of these processes separately for mothers and fathers. We focused on U.S. Mexican-origin families because Mexicans are the largest immigrant group in the U.S. (U.S. Census Bureau, 2018) and an ethnic-homogenous design supported direct assessment of values and bicultural competence specific to heritage Mexican and host mainstream cultural systems in the U.S.

Developmental Perspectives on Bicultural Competence

Bicultural competence includes a wide array of skills that enable individuals to (a) concurrently navigate heritage and host cultural domains (i.e., affiliation, attitudes, behaviors, beliefs, knowledge, and values), (b) switch between cultural frames of reference (e.g., frame-switching; Hong, Morris, Chiu, & Benet-Martinez, 2000), (c) integrate heritage and host cultural identities (i.e., bicultural identity integration; Benet-Martinez & Haritatos, 2005), and (d) access and combine diverse perspectives (i.e., integrative complexity; Tadmor & Tetlock, 2006).

Bicultural competence also includes individuals' facility to respond to bicultural demands (*bicultural facility*), feelings of comfort while managing bicultural demands (*bicultural comfort*), and perceived advantage in their ability to manage bicultural demands (*bicultural advantage*, Basilio et al., 2014; LaFromboise et al., 1993). Focusing on these behavioral, affective, and

cognitive components of bicultural competence is important because they are theorized to be the underpinning for the development of bicultural skills that enable individuals to access, navigate, switch, and integrate heritage and host cultural domains (Basilio et al., 2014).

Developmental perspectives provide theoretical support for an investigation of parents' value-based enculturation and acculturation processes influencing adolescents' bicultural competence. From late childhood to adolescence, youths increasing cognitive maturation (Arnett, 2014) supports understanding of demands associated with multiple cultural systems (Knight et al., 2018). Further, immigrant and ethnic-racial minority youths are embedded in family contexts shaped by parental enculturation and acculturation processes (García Coll et al., 1996; Knight et al., 2011; Motti-Stefanidi, Berry, Chryssochoou, Sam, & Phinney, 2012). These processes have important implications for youths' socialization, including diversity in parenting goals, beliefs, and practices (Kim, Shen, Huang, Wang, & Orozco-Lapray, 2014; Romero, Cuellar, & Roberts, 2000), because parent socialization is, in part, a reflection of parents' internalized cultural models (Super & Harkness, 1986; Weisner 2002). For ethnic-racial minority and immigrant parents, their internalized cultural models likely reflect both heritage and host cultural systems (Aldoney & Cabrera, 2016). Within ethnic-group diversity in parents' value-based enculturation and acculturation processes, therefore, implies within ethnic-group diversity in adolescents' developmental affordances (Masten & Obradović, 2006) and bicultural competence development. To our knowledge, this is the first study to investigate this developmental question.

Parenting Context and Youths' Bicultural Competence Development

To develop bicultural competence, individuals need to experience opportunities to learn about the heritage and the host cultures (Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016). For ethnic-racial minority and immigrant youths, the family context is often the primary context

in which youths are socialized about the *heritage culture* (Knight, Carlo, Mahrer, & Davis, 2016). Youths, however, are also socialized to learn about the *host culture* (Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli 2002) because the goal of many ethnic-racial minority and immigrant parents is to raise bicultural children (Aldoney & Cabrera, 2016; Kim & Hou, 2016). Ethnic-racial minority and immigrant parents engage in an active process of endorsement, rejection, and maintenance of heritage and host culture values, identifications, attitudes, practices, beliefs, and knowledge (Keller, 2003). Parents' values endorsements, in particular, can influence parents' internalized cultural models (Super & Harkness, 1986; Weisner 2002) and childrearing efforts (Aldoney & Cabrera, 2016; Bornstein & Cote, 2006). Prior work showed that parental values influence parents' goals (Suizzo, Tedford, & McManus, 2019), parenting styles (White, Zeiders, Gonzales, Tein, & Roosa, 2013), and socialization strategies (Aldoney & Cabrera, 2016). Further, parents with higher value endorsement engaged in higher socialization of those values with their youths, with further implications for youths' cultural competencies (Knight et al., 2011, 2016). Additionally, prior research suggests the parenting context provides youths with both enculturative and acculturative affordances (Gartner, Kiang, & Supple, 2014; Roche, Ghazarian, & Fernandez-Esquer, 2012; Schwartz & Zamboanga, 2008; Umaña-Taylor & Guimond, 2012). Diversity in parents' value-based enculturation and acculturation processes, therefore, should influence the extent to which youths are socialized vis-à-vis the heritage and host culture-specific developmental affordances necessary to develop bicultural competence.

Enculturation and acculturation are two processes comprising dual-cultural adaptation. Both unfold over time across individuals' lifespans (Sam & Berry, 2006) and result in some degree of change or maintenance in heritage and host cultural domains (Gonzales et al., 2002; Schwartz et al., 2010). Change or maintenance in cultural domains may take place at different

rates and have different implications for dual-cultural adaptation (Lee et al., 2018; Schwartz et al., 2010). Longitudinal parallel research, most of which has focused on adolescents, shows that enculturation and acculturation processes (across various cultural domains) change in similar directions (stable, increasing, or decreasing parallel trajectories) and are influenced by nativity status (Knight et al., 2009, 2010; Schwartz et al., 2013). These findings suggest that the processes are distinct, but not orthogonal (Knight et al., 2009, 2014). Thus, it is critical to examine parents' parallel trajectories of heritage and host cultural values to capture the concurrent influence of value-based enculturation and acculturation processes on youths' development of bicultural competence. Furthermore, though no prior work has examined it, it is critical to consider that the processes may interact to influence bicultural competence development (Bornstein, 2017). On one hand, youths who experience ample familial developmental affordances associated with both the heritage and the host cultures will likely reach higher levels of bicultural competence (Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016). On the other hand, prior work suggests that both heritage and host cultural values coexist within ethnic-racial and immigrant family systems, but may at times compete with one another (Garcia Coll & Marks, 2009; Tamis-LeMonda et al., 2008). It is possible, therefore, that value-based enculturation and acculturation processes may amplify (Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016) or attenuate (Garcia Coll & Marks, 2009; Tamis-LeMonda et al., 2008) each other's influence on adolescent bicultural competence. These empirical and theoretical tensions are consistent with theoretical propositions regarding the costs and benefits of adapting cultural systems of socialization for youths' development (White, Nair, & Bradley, 2018).

Though the theoretical foundation is strong (García Coll et al., 1996; Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016), there is limited and only indirect evidence for the association

between parental enculturation and acculturation processes and youths' bicultural competence in the extant literature. This evidence largely stems from examining the link between different indicators of parents' and youths' biculturalism. For example, Belgian parents' bilingualism was positively associated with their children's bilingualism (De Houwer, 2007). This finding is consistent with developmental theories suggesting that more exposure to familial developmental affordances associated with both cultures will be associated with higher adolescents' bicultural competence. Such a finding is consistent with positive main effects and, in light of theory (Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016) hints at possible amplification mechanisms. Further, U.S. Chinese immigrant mothers' (but not fathers') bicultural socialization beliefs (i.e., beliefs about the importance of teaching their youths about heritage and host cultures) were positively associated with youths' dual-cultural orientations (i.e., Chinese American). The positive association between mothers' host orientations and mothers' bicultural socialization beliefs, however, was stronger when their heritage orientations were lower (Kim & Hou, 2016). These findings illustrate the competing, or attenuating, influences of parental orientations toward heritage and host cultures on their socialization beliefs, and possibly on adolescent bicultural competence.

As enculturation and acculturation processes are theorized to be essential to the development of biculturalism (Gonzales et al., 2002), the research linking parents' and adolescents' biculturalism (De Houwer, 2007; Kim & Hou, 2016) offers indirect evidence that parents' enculturation and acculturation processes matter for youths' biculturalism. It may be critical to explore the antecedent processes of parental enculturation and acculturation, because, especially among immigrant families, these processes could be influencing youths' opportunities to develop bicultural competence before parents (themselves) achieve high bicultural

competence (Knight et al., 2018). Further, the existing research has not examined parental value-based enculturation and acculturation processes over time and has not assessed behavioral, affective, and cognitive components of adolescent bicultural competence.

The Current Study

The current study addresses important gaps in the understanding of normative cultural competency development by examining diversity in mothers' and fathers' (separately) value-based enculturation and acculturation processes during their youths' late childhood to middle adolescence, as predictors of late-adolescent behavioral, affective, and cognitive components of bicultural competence. First, we identified U.S. Mexican-origin parents' parallel trajectories (e.g., maternal change or stability) of values associated with the Mexican American culture and with the mainstream American culture over the five-year time period when their youths advanced from the 5th to the 10th grades. Second, we investigated how maternal or paternal value-based enculturation and acculturation processes related to adolescents' bicultural competence in late adolescence (12th grade). We were unable to control for prior levels (i.e., 5th grade) of adolescents' bicultural competence because the assessed components were not developmentally appropriate constructs during late childhood (Basilio et al., 2014). We, therefore, controlled for youths' 5th grade endorsements of Mexican American and mainstream American values, as these constructs are related to bicultural competence (Knight et al., 2014). We expected that higher 5th grade levels of parents' value-based enculturation or acculturation processes and/or increasing levels of enculturation and acculturation across time would be associated with higher adolescents' bicultural competence (Hypothesis One-Main Effects). Last, we examined parents' enculturation and acculturation processes interaction effects on adolescent bicultural competence. We tested whether the benefits of high and/or increasing parental

acculturation would be amplified (e.g., Ward & Geeraert, 2016) or attenuated (e.g., Tamis-Lemonda et al., 2008) by high and/or increasing parental enculturation (Hypothesis Two-Interaction Effects).

Method

Data were from a longitudinal study (2004 – 2013) of U.S. Mexican-origin families (Roosa et al., 2008). Participants included 749 youths (49% female), their mothers, and a subsample of fathers selected from 47 schools in the Phoenix metropolitan area. Families were eligible if they had a target 5th grader attending a sampled school; the participating mother was the biological mother, lived with the youth, and was of Mexican-origin; the youth's biological father was of Mexican-origin; the youth was not learning disabled; and no stepfather figure was living with the youth. Out of the 749 families, 579 were two-parent families and 80% of fathers in these families agreed to participate ($n = 467$). This research project titled Culture, Context, and Mexican American Mental Health was approved by the Arizona State University Social and Behavioral IRB (protocol # 0905004020). Complete research procedures are published elsewhere (Roosa et al., 2008). Participants completed computer assisted personal interviews (2.5 hours) at their home, in their preferred language, and were compensated \$45, \$50, \$55, and \$60 at each respective wave.

The current study used data from the first (W1, 5th grade), second (W2, 7th grade), third (W3, 10th grade), and fourth (W4, 12th grade) waves. In 5th grade, 30.2% of mothers, 23.2% of fathers, and 82.5% of youths chose to be interviewed in English and the remaining in Spanish. The majority of mothers (74.3%) and fathers (79.9%) were born in Mexico. Interview language and nativity were highly correlated (.80 for mothers and .83 for fathers). Most youths were born in the U.S. (70.3%). Mean age was 35.9 years ($SD = 5.81$) for mothers, 38.1 years ($SD = 6.26$)

for fathers, and 10.42 years ($SD = .55$) for youths. Parents reported about 10 years of education ($SD_M = 3.67$; $SD_F = 3.94$). Annual family incomes ranged from less than \$5,000 to more than \$95,000 (mean \$30,000 – \$35,000). Of the original 749 families, 94.8%, 85.4%, and 84.9% participated in 7th, 10th, and 12th grades, respectively.

Measures

Approach, demographic variables, and covariates. Mean scores were calculated for all scales to which participants provided data for at least 80% of the items. Otherwise, scale scores were set to missing. Mothers, fathers, and adolescents reported on a series of demographic characteristics including their date of birth, gender (0 = male; 1 = female), and nativity (0 = Mexico-born; 1 = U.S.-born). Mothers and fathers reported on annual family income (1 = \$0,000–\$5,000 to 20 = \$95,001+). Mothers reported on household structure (0 = 2-parent household; 1 = single-mother household). Adolescents reported on their endorsement of Mexican American and mainstream American values (5th grade) using the Mexican American Cultural Values Scale (MACVS; described in more detail below; Knight et al., 2010). The Cronbach's α were .85 (Mexican American) and .84 (mainstream American).

Parents' Mexican American (enculturative) and mainstream American (acculturative) values (5th, 7th, and 10th grades). Mothers and fathers reported on their endorsement of Mexican American and mainstream American values using the MACVS (Knight et al., 2010). Prior work presents evidence of reliability, validity, and invariance across groups that differed on Spanish versus English language use (Knight et al., 2010). The Mexican American values scale consists of 3 correlated subscales: Familism (16 items, e.g., “parents should teach their children that the family always comes first”); Respect (8 items, e.g., “children should always honor their parents and never say bad things about them”); and Religiosity (7

items, e.g., “one’s belief in God gives inner strength and meaning to life”). Prior work established the longitudinal factorial invariance of the Mexican American values subscales (Gonzales et al., 2018). The mainstream American values scale consists of 3 correlated subscales: Material Success (5 items, e.g., “the best way for a person to feel good about himself/herself is to have a lot of money”); Independence and Self-Reliance (5 items, e.g., “as children get older their parents should allow them to make their own decisions”); and Competition and Personal Achievement (4 items, e.g., “one must be ready to compete with others to get ahead”). To our knowledge, the longitudinal factorial invariance of the mainstream American values subscales has not been examined. Parents indicated their endorsement by responding with a five-point Likert-type scale: 1 (*not at all*), 2 (*a little*), 3 (*somewhat*), 4 (*very much*), and 5 (*completely*). We computed mean scores for Mexican American and mainstream American values subscales with higher scores indicating greater endorsement. Cronbach’s α for the Mexican American and mainstream American values were high at all waves ($\alpha \geq .88$). Parents’ mean scores on Mexican American and mainstream American values at each wave were used as indicators of parents’ enculturation and acculturation growth trajectories.

Adolescents’ bicultural competence (12th grade). Adolescents reported on behavioral, affective, and cognitive components of their bicultural competence (i.e., facility, comfort, and advantage, respectively) using the Mexican American Biculturalism Scale (MABS, Basilio et al., 2014). Prior work supported the construct validity, reliability, and language equivalence of the measure (Basilio et al., 2014). All subscales included 9 items. The facility subscale (e.g., “Being obligated to satisfy my family’s needs sometimes, and satisfying my own needs other times is ____”) responses ranged from 1 (*very easy*) to 5 (*very difficult*). The comfort subscale (e.g., “Sometimes you may need to make an important decision on your own, and other times you may

need to ask your family for advice. Which of the following best describes you?") responses ranged from 1 (*I am only comfortable when: [e.g., I need to ask my family for advice or make decisions on my own]*) to 5 (*I am always comfortable in both of these situations*). The advantage subscale (e.g., "For me being able to interact with other Mexican/Mexican Americans sometimes, and being able to interact with Whites (gringos) other times has ____") responses ranged from 1 (*many advantages*) to 5 (*many disadvantages*). Mean scores were calculated for each subscale with higher scores indicating higher levels of bicultural facility, comfort, and advantage. Cronbach's α were .83 (facility), .85 (comfort), and .85 (advantage). Based on prior work (Basilio et al., 2014), mean scores on each subscale were used as indicators of a bicultural competence latent construct.

Analytic Strategy

The full sample of mothers and their youths (from both single-mother households and two-parent households) represents one of the largest and most representative samples of U.S. Mexican-origin families (Roosa et al., 2008). The subsample of fathers from two-parent households represents an important population of fathers, one that reflects a wide range of environmental and cultural factors (Safa et al., 2018; White & Roosa, 2012). We estimated, therefore, hypothesized models separately in the full sample of mother-adolescent dyads ($N = 749$) and in the subsample of father-adolescent dyads ($n = 579$).

Preliminary Analyses

First, preliminary analyses were conducted in SPSS 24 (IBM Corp., 2016). We examined differences between two-parent families with participating versus non-participating fathers, conducted attrition analyses by wave, and examined descriptive statistics. If significant differences emerged in attrition analyses, variables could be included in subsequent analytic

models to reduce bias attributed to missingness (Enders, 2010). We estimated intraclass correlations coefficients (ICCs) and design effects (DEs) for all study variables to examine the impact of the school-based sampling design. DEs under two indicated that the sampling design did not bias estimates or standard errors (Muthén & Satorra, 1995). Prior to moving onto primary analyses, we also established longitudinal factorial invariance of the MACVS mainstream American subscales.

Primary Analyses

We conducted linear latent growth analyses using software available in *Mplus* version 8 (Muthén & Muthén, 2010). Missing data were handled using full information maximum likelihood estimation with robust standard errors (MLR; Enders, 2013). Although model fit indices must be interpreted with caution for latent growth models (Preacher, Wichman, MacCallum, & Briggs, 2008), multiple fit indices were examined to assess global model fit; good (acceptable) fit is reflected by a non-significant chi-square test, CFI greater than .95 (.90), RMSEA less than .05 (.08; Hu & Bentler, 1999; Little, 2013), and SRMR less than .05 (.08; Hu & Bentler, 1999).

To support hypotheses testing, we first estimated parallel process models representing mothers' or fathers' (separately) concurrent enculturation and acculturation processes. These prerequisite latent growth analyses proceeded in three steps. First, we estimated the unconditional linear growth models for parents' value-based enculturation and acculturation processes. Model specification included intercept loadings set to 1 to represent the equal influence on each repeated measure and slope loadings set to 0 (5th grade), 2 (7th grade), and 5 (10th grade) to account for unequal time between assessments. Thus, the growth factors represent parents' values endorsements when their youths were in the 5th grade (intercepts) and amount of

linear change per grade (slopes). Second, we estimated parallel process models of enculturation and acculturation to capture the concurrent nature of these processes. Model specifications included (a) covariances between residuals of observed variables within time (e.g., 5th grade Mexican American values endorsement residual with 5th grade mainstream American values endorsement residual) and (b) growth factors allowed to freely covary. Third, we included parent nativity as a predictor of the growth factors to acknowledge nativity differences in parents' enculturation and acculturation processes (Knight et al., 2009, 2010). The results from this prerequisite latent growth analyses were used to support hypotheses testing.

To test hypothesis one, we included 12th grade adolescents' behavioral, affective, and cognitive components of bicultural competence as a distal latent outcome and tested the influence of parents' enculturation and acculturation processes (derived from the preceding parallel process models) on adolescent' bicultural competence. To test hypothesis two, we estimated models with latent variable interaction terms between enculturation and acculturation growth factors using the XWITH command. This step relies on recent developments of the latent moderated structural equations method (LMS; Marsh, Wen, & Hau, 2006; Maslowsky, Jager, & Hemken, 2014). Following the recommended two-step procedure (Maslowsky et al., 2014), we first estimated null models without the latent interaction terms using specifications from main effects models but omitting any auxiliary variable because the AUXILIARY (M) command is not currently supported in conjunction with the LMS framework. Interactions of growth factors with significant variability were tested one at a time. We used a log-likelihood ratio test to determine significance of an interaction term by assessing the relative fit of the model without (null model) versus with the interaction term. An interaction term was retained in the model and

interpreted if the log-likelihood ratio test indicated that not including the term represented a significant loss in model fit (Maslowsky et al., 2014).

Sensitivity Analyses

Because adolescents' gender and nativity are developmentally salient social position variables (García Coll et al., 1996), we conducted multi-group analyses to assess stability of associations across adolescents' gender and nativity groups. We also assessed invariance of associations across household structure in the mother-adolescent dyad sample because that sample included both two-parent and single-mother families. Specifically, a fully unconstrained model was compared to a partially constrained model (with paths between growth factors with significant variability and adolescents' bicultural competence constrained) using a Satorra-Bentler chi-square difference test (Satorra, 2000). A non-significant chi-square suggested invariance. Because of coefficient stability and convergence problems associated with the XWITH command (Maslowsky et al., 2014), we were not able to conduct gender, nativity, and household structure multi-group analyses on models including interaction terms. Last, to shed light on the simultaneous influence of mothers' and fathers' in two-parent family contexts ($n = 579$), we conducted additional sensitivity analyses and present these in supplementary materials (see Supplemental Analyses).

Results

Preliminary Analysis

First, we examined whether two-parent families with participating fathers ($n = 467$) differed from two-parent families in which fathers did not participate ($n = 112$). No differences were found in child demographic (i.e., age, nativity, gender), mother demographic (i.e., age, nativity, family annual income), or study variables. In addition, attrition analyses examined

whether families who participated in interviews in 7th, 10th, and 12th grades differed on 5th-grade child demographic (i.e., age, nativity, gender) and parent demographic (i.e., age, nativity, family annual income) variables from those that did not. Most demographic comparisons were nonsignificant, though families who participated in 10th grade ($n = 640$) reported higher family annual income [$t(730) = -2.96, p = .003$] and youths were less likely to be born in Mexico [$\chi^2(1) = 4.68, p = .041$] compared to those who did not participate in 10th grade ($n = 109$). Families who participated in 12th grade ($n = 636$) reported higher family annual income [$t(730) = -3.17, p = .002$] and youths were less likely to be male [$\chi^2(1) = 8.43, p = .004$] compared to those who did not participate in 12th grade ($n = 113$). No differences were observed in study variables. To reduce bias attributed to missingness (Enders, 2010), we included 5th grade family annual income as an auxiliary variable in subsequent analyses that did not rely on the XWITH command.

Descriptive statistics are presented in Table 1. Parents' mean endorsements of Mexican American values were consistently high at each grade. Thus, parents' higher levels of Mexican American values ($+1SD$) corresponded to scores close to five on the response scale, or complete endorsement; lower levels ($-1SD$), corresponded to scores close to four, or very much endorsement. Parents' means of mainstream American values were consistently moderate at each grade. Thus, parents' higher levels of mainstream American values ($+1SD$) corresponded to scores close to four, or very much endorsement; lower levels ($-1SD$), corresponded to scores close to three, or somewhat endorsing these values. Adolescents' mean scores on bicultural facility, comfort, and advantage were moderately high, with scores above the midpoint on the scale (3.51 – 4.13) and standard deviations ranging from half a point to a point (.54 – .96). The distributions of study variables were acceptable (i.e., skewness < 1 , kurtosis < 2 ; West, Finch, & Curran, 1995). The mean design effect of study variables was 1.03 (range: 1.00 – 1.10)

indicating no bias introduced by the school-based sampling design.

[INSERT TABLE 1 HERE]

Last, we established longitudinal factorial invariance of the mainstream American Cultural Values Scales across the three waves. Prior work has demonstrated longitudinal factorial invariance at both the loading and intercept levels for each of the Mexican American values subscales for mother report and father report (Gonzales et al., 2018). Similarly, we examined invariance using Chen's (2007) criteria (e.g., invariance holds if the difference in the CFI between the constrained model and the unconstrained model is .01) for each of the mainstream American values subscales separately by reporter (i.e., mothers and fathers). We found longitudinal factorial invariance holds at both the loading and intercept levels for each of the subscales for mother and father reports. Following recommended suggestions by Little (2013), we concluded mean comparisons across time were appropriate and proceeded to examine the growth trajectories.

Mother-Adolescent Dyads Primary Analyses

Prerequisite estimation of mothers' parallel enculturation and acculturation processes. Results of prerequisite latent growth analyses are shown in Table 2 and Supplemental Table 1. First, the estimated unconditional linear growth model for mothers' value-based enculturation demonstrated good fit. On average, mothers' value-based enculturation across their youths' late childhood to middle adolescence was high [$\mu_{\alpha} = 4.41$, $SE = .01$, $p < .001$] and stable [$\mu_{\beta} = -.00$, $SE = .00$, $p = .619$]. As indicated by intercept and slope variances, respectively, there were significant individual differences in 5th grade levels of mothers' enculturative values [$\psi_{\alpha\alpha} = .09$, $SE = .01$, $p < .001$], and change across time [$\psi_{\beta\beta} = .00$, $SE = .00$, $p = .021$]. The unconditional model for mothers' value-based acculturation demonstrated good fit. On average,

mothers' value-based acculturation across their youths' late childhood to middle adolescence was moderate [$\mu_{\alpha} = 3.20$, $SE = .02$, $p < .001$] and stable over time [$\mu_{\beta} = .00$, $SE = .00$, $p = .700$]. There was significant variability in 5th grade levels of mothers' acculturative values [$\psi_{\alpha\alpha} = .27$, $SE = .02$, $p < .001$], but not in change across time [$\psi_{\beta\beta} = .00$, $SE = .00$, $p = .165$]. Because there was no significant variability in the acculturation slope, only variability associated with the enculturation intercept, enculturation slope, and acculturation intercept were examined in subsequent analyses. Second, the estimated parallel linear growth model demonstrated good fit (Supplemental Figure 1). There was a positive correlation between mothers' 5th grade value-based enculturation and acculturation levels [$r = .38$, $SE = .05$, $p < .001$]. Third, the estimated model with mothers' nativity as a predictor demonstrated good fit (Supplemental Figure 2). Mothers born in the U.S. had lower average 5th grade levels of value-based enculturation ($\beta = -.22$, $SE = .10$, $p = .020$) and acculturation ($\beta = -1.11$, $SE = .07$, $p < .001$) compared to mothers born in Mexico.

[INSERT TABLE 2 HERE]

Hypotheses Testing. First, we tested our main effects hypothesis and present findings in supplemental materials (Supplemental Figure 3). The estimated model demonstrated overall good fit. There was a positive main effect of mothers' 5th grade levels of value-based acculturation on adolescents' bicultural competence in 12th grade ($\beta = .14$, $SE = .05$, $p = .007$), controlling for the enculturation growth factors and for adolescents' 5th grade endorsement of Mexican American and mainstream American values. No association was found for mothers' 5th grade levels of value-based enculturation ($\beta = -.02$, $SE = .06$, $p = .723$), or mothers' change in enculturation over time ($\beta = .04$, $SE = .10$, $p = .697$) and adolescents' bicultural competence.

Next, we tested our interaction effects hypothesis. First, we investigated the influence of the intercepts' interaction, or the interacting influence of mothers' 5th grade levels of value-based enculturation and acculturation, on 12th grade adolescents' bicultural competence. Following the recommend two-step procedure (Maslowsky et al., 2014), the estimated null model (i.e., main effects model with no auxiliary variable) demonstrated overall good fit, $\chi^2(43) = 84.61, p < .001$; CFI = .98, RMSEA = .04; SRMR = .04, replicated findings from the main effects model (Supplemental Figure 3), and supplied model fit indices for the subsequent step (Muthén, 2012). Next, we included the interaction term between 5th grade levels of value-based enculturation and acculturation. A log-likelihood ratio test indicated that the null model represented a significant loss in fit relative to the model with the interaction [$\Delta\chi^2(1) = 6.58, p = .010$], thus we retained the model with the 5th grade enculturation and acculturation levels interaction (Figure 1). The model accounted for 9% of the variability in 12th grade adolescents' bicultural competence.

[INSERT FIGURE 1 HERE]

There was a negative interaction between 5th grade value-based enculturation and acculturation levels predicting adolescents' bicultural competence in 12th grade ($\beta = -.12, SE = .05, p = .021$). As shown in Figure 2, there was no association between mothers' 5th grade acculturation levels and adolescents' bicultural competence when mothers were one standard deviation above (+1SD) the average 5th grade enculturation level. The association between mothers' 5th grade acculturation levels and adolescents' bicultural competence was positive when mothers were one standard deviation or more below (-1SD) the average 5th grade enculturation level. Notably, +1SD on 5th grade enculturation levels corresponded to values above or equal to 4.70 and -1SD corresponded to values below or equal to 4.10. Thus, for the +1SD group, the association between mothers' 5th grade value-based acculturation levels and adolescents'

bicultural competence was tested at levels close to five (complete endorsement of enculturative values) on the response scale. For mothers in the *-ISD* group, the association between mothers' 5th grade acculturation levels and adolescents' bicultural competence was tested at levels close to four (high, but not complete endorsement of enculturative values) on the response scale. Finally, the log-likelihood ratio test indicated that the interaction between mothers' enculturative change and mothers' 5th grade acculturation levels should not be retained in the model [$\Delta\chi^2(1) = .40, p = .527$].

[INSERT FIGURE 2 HERE]

Sensitivity Analyses

We reported model fit indices for sensitivity analyses in Supplemental Table 2. Satorra-Bentler scaled chi-square difference tests indicated that mothers' value-based enculturation and acculturation main effects on adolescents' bicultural competence did not differ by household structure [$\Delta\chi^2(3) = 4.64, p = .200$], or adolescents' gender [$\Delta\chi^2(3) = .95, p = .814$], or nativity [$\Delta\chi^2(3) = 6.77, p = .080$]. In light of these findings, we conducted a follow-up analysis and included gender, nativity, and household structure as covariates on the outcome variable. Findings were comparable to those from the model without covariates (i.e., no differences in coefficient direction and significance levels); thus, we retained the more parsimonious model. A series of sensitivity tests with the subsample of two-parent families wherein the influence of maternal enculturation and acculturation processes are examined while accounting for fathers' observed baseline levels of Mexican American and mainstream American values can be found in the supplemental analyses section of supplemental materials.

Father-Adolescent Dyads Primary Analyses

Prerequisite estimation of fathers' parallel enculturation and acculturation

processes. Results of prerequisite latent growth analyses are shown in Table 2 and Supplemental Table 1. First, the estimated unconditional linear growth model for fathers' value-based enculturation demonstrated good fit. On average, fathers' value-based enculturation across their youths' late childhood to middle adolescence was high [$\mu_{\alpha} = 4.39, SE = .02, p < .001$] and slightly declining [$\mu_{\beta} = -.01, SE = .00, p = .004$]. As indicated by intercept and slope variances, respectively, there were significant individual differences in 5th grade levels of fathers' enculturative values [$\psi_{\alpha\alpha} = .09, SE = .01, p < .001$], but not in change across time [$\psi_{\beta\beta} = 00$]. The unconditional model for fathers' value-based acculturation demonstrated overall good fit. On average, fathers' value-based acculturation across their youths' late childhood to middle adolescence was moderate [$\mu_{\alpha} = 3.42, SE = .03, p < .001$] and stable over time [$\mu_{\beta} = -.00, SE = .00, p = .463$]. There was significant variability in 5th grade levels of fathers' acculturative values [$\psi_{\alpha\alpha} = .29, SE = .02, p < .001$], but not in change across time [$\psi_{\beta\beta} = .00, SE = .00, p = .091$]. Because there was no significant variability in the enculturation and acculturation slopes, only variability associated with the enculturation and acculturation intercepts were examined in subsequent analyses. Second, the estimated parallel linear growth model demonstrated good fit (Supplemental Figure 4). There was a positive correlation between fathers' 5th grade value-based enculturation and acculturation levels [$r = .40, SE = .05, p < .001$]. Third, the estimated model with fathers' nativity as a predictor demonstrated overall good fit (Supplemental Figure 5). Fathers born in the U.S. had lower average 5th grade levels of value-based acculturation ($\beta = -.43, SE = .04, p < .001$) compared to fathers born in Mexico.

Hypotheses testing. First, we tested our main effects hypothesis. The estimated model demonstrated overall good fit (Figure 3). There was a negative main effect of fathers' 5th grade

levels of value-based enculturation on adolescents' bicultural competence in 12th grade ($\beta = -.18$, $SE = .06$, $p = .004$). There was a positive main effect of fathers' 5th grade levels of value-based acculturation on adolescents' bicultural competence in 12th grade ($\beta = .13$, $SE = .06$, $p = .036$), controlling for the other intercept and for adolescents' 5th grade endorsement of Mexican American and mainstream American values. The model accounted for 8% of the variability in 12th grade adolescents' bicultural competence. Next, we followed the recommend two-step procedure (Maslowsky et al., 2014) to test the interacting influence of fathers' 5th grade value-based enculturation and acculturation levels on 12th grade adolescents' bicultural competence. The log-likelihood ratio test indicated that the interaction term should not be retained in the model [$\Delta\chi^2 (1) = 2.02$, $p = .155$].

[INSERT FIGURE 3 HERE]

Sensitivity Analyses

We reported model fit indices for sensitivity analyses in Supplemental Table 2. Satorra-Bentler chi-square difference tests indicated that fathers' value-based enculturation and acculturation main effects on adolescents' bicultural competence did not differ by adolescents' gender [$\Delta\chi^2 (2) = 2.63$, $p = .268$] or nativity [$\Delta\chi^2 (2) = 4.62$, $p = .100$]. In light of these findings, we conducted a follow-up analysis including gender and nativity as covariates on the outcome variable. Findings were comparable to those from the model without the covariates; thus, we retained the more parsimonious model. A series of sensitivity tests with the subsample of two-parent families wherein the influence of paternal enculturation and acculturation processes are examined while accounting for mothers' observed baseline levels of Mexican American and mainstream American values can be found in the supplemental analyses section of supplemental materials.

Discussion

The current study bridges important gaps in empirical literature on normative cultural competency development by examining how dual-cultural adaptation in the maternal and paternal contexts relates to the development of adolescents' behavioral, affective, and cognitive components of bicultural competence. These components are theorized to be the underpinning for the development of the skills that enable individuals to manage heritage and host cultural systems (Basilio et al., 2014). We examined how U.S. Mexican-origin parents' value-based enculturation and acculturation processes related to adolescents' bicultural competence. Findings indicated that U.S. Mexican-origin mothers' higher value-based acculturation levels when their youths were in the 5th grade (late childhood) positively predicted late-adolescent bicultural competence, but only when mothers' 5th grade enculturation levels were on the lower end (albeit still above the midpoint on the response scale) of the sample distribution. U.S. Mexican-origin fathers' higher 5th grade value-based acculturation levels positively predicted adolescents' bicultural competence, whereas fathers' higher 5th grade value-based enculturation levels negatively predicted adolescents' bicultural competence. All main effect findings generalized across adolescent gender and nativity; as well as across household structure in the mother-adolescent dyad sample. By identifying family systems characterized by diverse trajectories of parents' adaptation toward Mexican American and mainstream American cultural values, the current study contributes to better understandings of how within-group cultural diversity can be both promoting and inhibiting (White et al., 2018) for adolescents' bicultural competence development.

Associations of Parental Value-Based Enculturation and Acculturation Processes with Adolescents' Bicultural Competence Development

First, we describe the nature of parents' value-based enculturation and acculturation processes in this sample. U.S. Mexican-origin parents' value-based enculturation was characterized by high and stable (for mothers) or slightly declining (for fathers) endorsement of Mexican American values. Parents' value-based acculturation was characterized by moderate and stable endorsement of mainstream American values. Further, consistent with models of dual-cultural adaptation (Knight et al., 2009, 2014; Schwartz et al., 2013), these processes were positively correlated with one another.

Mothers. The final model for value-based maternal enculturation and acculturation associations with adolescent bicultural competence involved a significant interaction. Relative to the sample distribution described in the results, we conclude that, for U.S. Mexican-origin youths developing in late childhood family contexts characterized by mothers who had high but not complete endorsement of Mexican American values (maintained across time), maternal endorsement of mainstream American values during their youths' late childhood (maintained across time) positively predicted late-adolescent bicultural competence. This finding could be interpreted as consistent with an amplification mechanism, given that the combination of maternal high (but not complete) value-based enculturation and higher value-based acculturation was associated with the highest levels of adolescent bicultural competence.

This finding extends prior research and is consistent with developmental theory. For example, among Belgian families, mothers' bilingualism was more positively associated with their children's bilingualism when they consistently used both languages at home (De Houwer, 2007). Thus, mothers who highly (but not completely) endorse values associated with the heritage and host cultures may be better positioned to provide adolescents with consistent, ample affordances across cultural systems, hence promoting their bicultural competence development

(Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016). It may be that immigrant mothers who moderately or highly (vs. completely) endorse values associated with heritage and host cultural systems also endorse more socialization goals, beliefs, and practices associated with both cultures (Romero et al., 2000; Super & Harkness, 1986; Weisner 2002), and experience more facility navigating between heritage and host cultural values (Kim et al., 2014), thus providing youths with more opportunities to develop bicultural competence.

On the other hand, for U.S. Mexican-origin youths developing in late childhood family contexts characterized by mothers who had almost complete endorsement of Mexican American values (maintained across time), maternal endorsement of mainstream American values during their youths' late childhood (maintained across time) did not predict late-adolescent bicultural competence. Thus, the benefits of mothers' value-based acculturation processes, in particular higher 5th grade levels, for late-adolescent bicultural competence were attenuated in the context of almost complete endorsement of Mexican American values. This finding illustrates ways in which mothers' heritage and host cultural values may at times compete with one another (Garcia Coll & Marks, 2009; Tamis-LeMonda et al., 2008) and suggests that this competition and attenuation occurs when U.S. Mexican-origin mothers' have almost complete endorsement of Mexican American values.

Our work extends prior research showing a competing or attenuating association. Specifically, among predominantly first-generation immigrant U.S. Chinese-origin families, Kim and Hou (2016) found a positive association between mothers' bicultural socialization beliefs and youths' dual-cultural orientations (i.e., Chinese American orientations). The positive association between mothers' American orientations and mothers' bicultural socialization beliefs was stronger when their Chinese orientations were lower. In the case of the U.S. Chinese-origin

mothers in Kim and Hou's study and the U.S. Mexican-origin mothers in the current study, the highest levels of endorsement of the heritage culture may constrain mothers from promoting adolescent biculturalism because these highest endorsements leave little psychological and behavioral space for the host cultural socialization needed to promote bicultural competence development. Mothers who almost completely endorse heritage values might feel the need to consistently prioritize those values, thus favoring heritage cultural socialization goals, beliefs, and practices (Knight et al., 2011, 2016; Super & Harkness, 1986; Weisner, 2002). This, in turn, may reduce youths' opportunities to feel part of the U.S. society at large, participate in culture traditions, and internalize values deemed important in the mainstream culture, thus reducing youths' opportunities to easily, comfortably, and desirably access, navigate, switch, and integrate heritage and host cultural domains.

Fathers. The final model for value-based paternal enculturation and acculturation associations with adolescent bicultural competence involved significant main effects. Our findings suggest that heritage and host cultural values coexist within ethnic-racial and immigrant family systems and may, at times, compete with one another (Garcia Coll & Marks, 2009; Tamis-LeMonda et al., 2008). Consistent with our main effects hypothesis, which was situated within biculturalism models suggesting that individuals need to experience opportunities to learn about both cultures (Motti-Stefanidi et al., 2012; Ward & Geeraert, 2016), U.S. Mexican-origin youths developing in late childhood family contexts shaped by fathers who exhibited higher endorsement of mainstream American values (maintained across time) had higher levels of bicultural competence in late adolescence. These youths may have experienced more affordances associated with the host culture as their fathers maintained high host cultural value systems. They may have experienced more congruency in cultural values, and in turn, in the affordances

found within and outside the family context (Knight et al., 2016). Congruency can promote adolescent facility, comfort, and perceived advantage when accessing, navigating, switching, and integrating heritage and host cultural domains (Benet- Martinez & Haritato, 2005; Safa et al., 2018). Prior work among Latina mothers found that U.S. cultural orientations were associated with socialization beliefs granting youths with behavioral autonomy and independence (Roche et al., 2014). It may be that Latino family contexts shaped by higher levels of paternal acculturation are also characterized by higher mainstream culture socialization goals, beliefs, and practices (Knight et al., 2016; Super & Harkness, 1986; Weisner, 2002). These family contexts may promote adolescent bicultural competence by affording youths with more freedom to explore both cultural systems.

Contrary to our main effects hypothesis, U.S. Mexican-origin youths developing in late childhood family contexts shaped by fathers who exhibited higher endorsement of Mexican American values had lower levels of bicultural competence in late adolescence. In the current sample, fathers' overall endorsement of Mexican American values was restricted, ranging between very much to complete endorsement of these values. Prior work has documented the positive link between U.S. Latino and Asian parents' indicators of high enculturation (i.e., high endorsement of heritage values and socialization practices) and youths' development of heritage culture competencies (i.e., endorsement of heritage values and identities; Knight et al., 2011; Umaña-Taylor & Guimond, 2012) and host culture competencies (i.e., endorsement of host values, practices, and identities; Gartner et al., 2014; Schwartz & Zamboanga, 2008). Our findings, however, suggest that there may be a ceiling effect, such that increases in enculturative values, up to a certain point, are ideal for promoting adolescent biculturalism. At a certain point, however, they may inhibit adolescent development of bicultural competence. Though a sample

with a restricted range does not permit examination of such an effect, our findings suggest an important area for future research. Further, research among predominantly first-generation immigrant U.S. Chinese-origin families showed that fathers with higher Chinese orientations experienced more problems balancing demands from the mainstream American and Chinese American cultures (Kim et al., 2014). It may be that very high levels of fathers' endorsement of the heritage culture constrain their abilities to balance demands from the heritage and the host cultures, and in turn, constrain fathers' from promoting adolescent biculturalism. Fathers might feel the need to prioritize values associated with the heritage culture, thus favoring heritage cultural socialization goals, beliefs, and practices (Knight et al., 2011, 2016; Super & Harkness, 1986; Weisner, 2002). This in turn, may reduce youths' opportunities to participate in host cultural practices, internalize values, and interact with members from the mainstream culture. Limited host cultural affordances may constrain adolescent opportunities to easily, comfortably, and desirably access, navigate, switch, and integrate heritage and host cultural domains.

In addition, it may be that in U.S. Mexican-origin family contexts shaped by very high levels of fathers' enculturation, adolescents may experience more cultural dissonance (Telzer, Yuen, Gonzales, & Fuligni, 2016) and pressure to enculturate (Rodriguez et al., 2002), thus undermining their ability to respond to bicultural demands with facility, comfort, and perceived advantage (Basilio et al., 2014). Further, family contexts determine the costs and benefits associated with specific youths' developmental competencies (Garcia Coll et al., 1996; White et al., 2018). U.S. Mexican-origin family contexts characterized by high levels of paternal enculturation, therefore, may prioritize benefits associated with developing heritage culture competencies. Adolescents, in turn, may not feel as comfortable practicing host culture competencies in these contexts.

Strengths, Limitations, and Future Directions

Although the current study's sample is representative of the U.S. Mexican-origin population in the urban area sampled (Roosa et al., 2008), there was relatively limited variability in parents' levels of value-based enculturation and acculturation. Overrepresenting the number of immigrants beyond the second generation, and including more recent first-generation immigrants, might increase this variability and afford a stronger test of developmental theory. However, it would be important to acknowledge that such an overrepresentation may produce findings that are of unclear generalizability to the population of U.S. Mexican-origin families. Next, a wide range of parents' values, as were employed herein, may have the greatest influence in shaping socialization, or heritage and host cultural affordances and demands. Our approach, however, did not allow for examination of any variability in the specific trajectories of different values (e.g., familism alone). Future work might consider examining the associations among parents' trajectories of specific enculturative and acculturative values and adolescent biculturalism. This more nuanced approach may capture additional variability in parents' value-based enculturation and acculturation processes.

We focused on values because they are central to parents' internalized cultural models that shape their parenting goals, beliefs, and practices (Bornstein & Cote, 2006; Super & Harkness, 1986; Weisner, 2002). We also, however, acknowledge that values may change at slower rate or remain stable (Lee et al., 2018). Future work might consider examining growth trajectories in other enculturative and acculturative domains (e.g., affiliation, attitudes, behaviors, beliefs, and knowledge) that may also shape youths' bicultural competence development. In addition, using an ethnic-homogenous design supported assessment of values and aspects of bicultural competence associated with Mexican American and mainstream American cultural

systems. The specific measured values and bicultural competence items may not generalize to other populations. Our developmental arguments and research questions, however, are likely to generalize to other immigrant and ethnic-racial minority populations, as parents' endorsements of heritage cultural and host cultural values shape youths' socialization (Bornstein & Cote 2006; Super & Harkness, 1986; Weisner, 2002).

Next, this work focused on behavioral, affective, and cognitive bicultural competence components, which are theorized to be the underpinning for the development of bicultural skills (Basilio et al., 2014). For a more comprehensive picture on bicultural competence development, future work may consider examining the associations among parents' enculturative and acculturative values and adolescent bicultural skills, including development of frame-switching and integrative complexity. Further, means on adolescent bicultural facility, comfort, and advantage were relatively high in this sample. This sample originated in the Phoenix metro area, a societal context with a long history of Mexican migration and an established, multigenerational U.S. Mexican population (Roosa et al., 2008). It will be important, therefore, to examine differences in the direction and magnitude of parental enculturation and acculturation effects on adolescent bicultural competence in more emerging immigrant destinations, where there may be more variability in bicultural competence development.

Importantly, the use of a longitudinal, prospective analysis allowed us to capture early family processes that set into motion the development of adolescent bicultural competence. Further, controlling for earlier levels of developmentally appropriate constructs (i.e., 5th grade adolescent Mexican American and mainstream American values) afforded a stronger test of the model. The prospective nature, however, did not afford a test of bidirectional effects (e.g., Perez-Brena, Updegraff, & Umaña-Taylor, 2015). Future work may consider examining bidirectional

effects, as well as more proximal influences on youths' bicultural competence development like socialization beliefs, goals, and practices. Although the family is an important context for youths' development (Garcia Coll et al., 1996), future work should incorporate other critical socialization settings (e.g., school, neighborhood; Eccles et al., 1993). Taking a broader view that includes the influence of multiple settings can provide a more comprehensive picture of the ways in which contextual affordances associated with the heritage and host cultural systems might simultaneously influence adolescent bicultural competence.

Conclusions

This research contributes to developmental psychology by increasing understanding of the influence of parents' value-based enculturation and acculturation processes on adolescents' behavioral, affective, and cognitive components of bicultural competence. The former represents a normative source of family diversity and the latter represents a normative developmental competency for immigrant and ethnic-racial minority youths. Findings indicated that parental enculturation and acculturation processes simultaneously work to influence adolescent bicultural competence, sometimes in competing ways. These findings suggest that U.S. Mexican-origin parents' internalized cultural models have implications for adolescent bicultural competence development, likely because these models influence parents' socialization beliefs, goals, and practices (Super & Harkness, 1986; Weisner, 2002). Further, they exemplify ways in which adapting cultural systems of socialization, situated within parents' internalized heritage and host cultural models (Aldoney & Cabrera, 2016), can have both costs and benefits for youths' development and their influence may depend upon diverse family roles and structures, including, for example maternal versus paternal roles (see Supplemental Analyses: Discussion; White et al., 2018). The practical importance of this work relies on extensions to prior work documenting that

even small magnitude differences in bicultural competence can be associated with indicators of adjustment (e.g., Carrera & Wei, 2014; Huynh, Benet-Martínez, & Nguyen, 2018; Safa et al., 2018). Additionally, it may be important for developmental psychologists to consider that U.S. Mexican-origin adolescents developing in family contexts characterized by very high levels of maternal or paternal enculturative values may need additional, extrafamilial supports to achieve the highest levels of bicultural competence, if that is their goal. By examining, therefore, the association of multiple and at times competing familial contextual influences with adolescent bicultural competence development, this work provides insights on intergenerational cultural transmission and advances scholarship on the culturally adaptive nature of human development.

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Table 1*Descriptive Statistics and Intercorrelations for Study Variables in the Parent-Adolescent Dyad Samples*

Variables	1	2	3	4	5	6	7	8	9	10	11	<i>M</i>	<i>SD</i>
1. 5 th Mexican Values (P)	—	.42**	.70**	.30**	.69**	.27**	.06	.05	-.06	.02	-.07	4.38	.38
2. 5 th Mainstream Values (P)	.37**	—	.33**	.72**	.23**	.64**	-.04	.04	.00	-.01	.00	3.40	.62
3. 7 th Mexican Values (P)	.64**	.24**	—	.44**	.71**	.36**	.06	.07	-.11*	-.09	-.11*	4.37	.36
4. 7 th Mainstream Values (P)	.26**	.68**	.41**	—	.26**	.71**	-.02	.07	.04	-.00	.06	3.44	.59
5. 10 th Mexican Values (P)	.64**	.27**	.70**	.32**	—	.39**	.00	-.01	-.06	-.08	-.08	4.34	.37
6. 10 th Mainstream Values (P)	.26**	.69**	.30**	.74**	.40**	—	-.00	.09	.06	.01	.04	3.38	.57
7. 5 th Mexican Values (Y)	.03	-.04	.06	.00	.04	-.02	—	.28**	.08	.15**	.16**	4.51	.33
8. 5 th Mainstream Values (Y)	.04	.13**	.03	.10**	.00	.12**	.29**	—	-.06	-.09*	-.06	2.92	.76
9. 12 th Bicultural Facility (Y)	.02	.04	.02	.10*	.06	.12**	.07	-.03	—	.49**	.59**	3.90	.59
10. 12 th Bicultural Comfort (Y)	.08	.05	.04	.03	.04	.03	.16**	-.10*	.48**	—	.37**	3.52	.96
11. 12 th Bicultural Advantage (Y)	.01	.05	-.00	.05	.05	.09*	.14**	-.05	.58**	.40**	—	4.13	.54
<i>M</i>	4.41	3.20	4.39	3.20	4.40	3.19	4.52	2.91	3.87	3.51	4.10		
<i>SD</i>	.37	.62	.40	.62	.39	.61	.33	.74	.59	.96	.55		

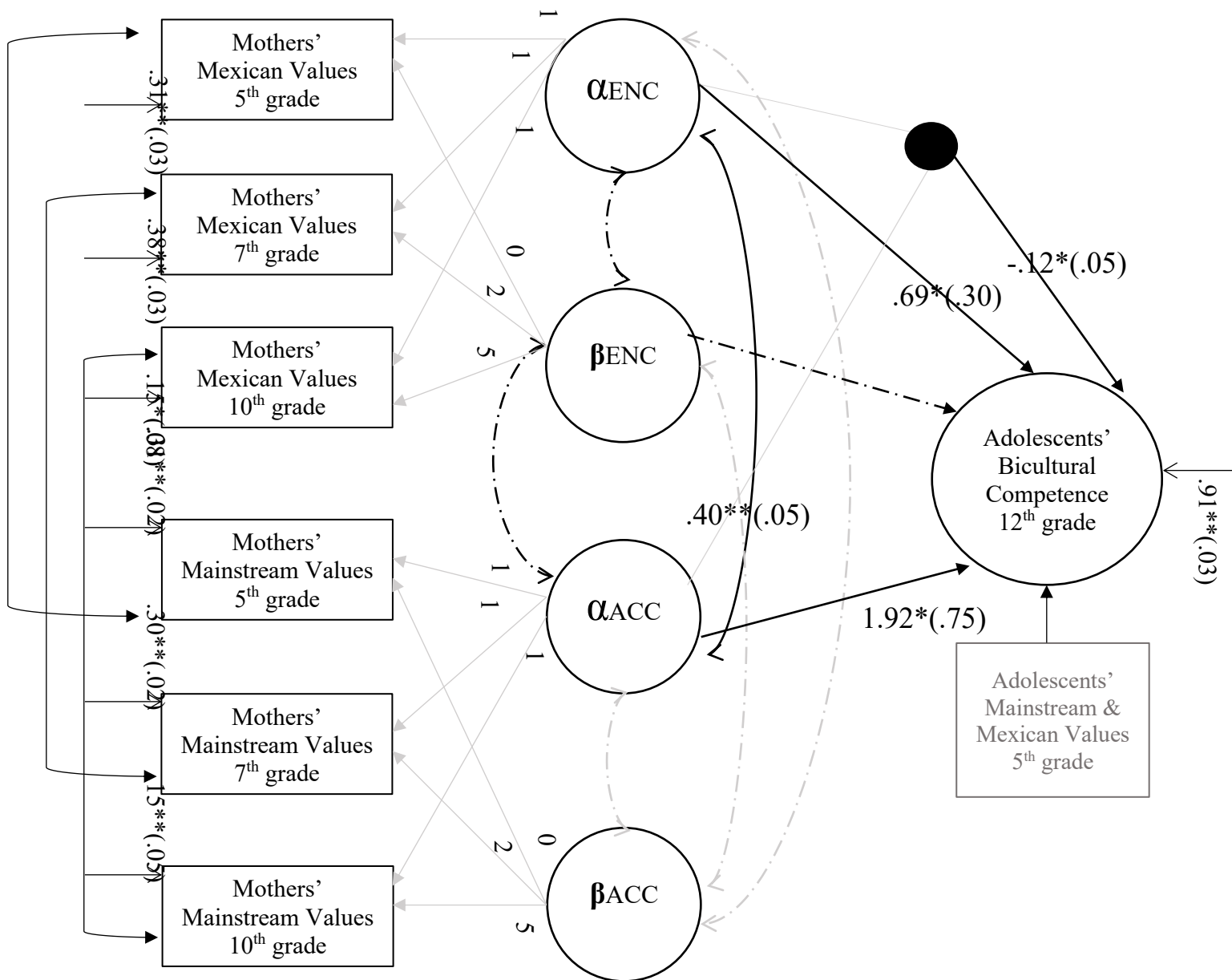
Note. P = Parent report; Y = Youth report; 5th = 5th grade; 7th = 7th grade; 10th = 10th grade; 12th = 12th grade. Mothers' statistics and correlations ($N = 749$) are reported below the diagonal and fathers' statistics and correlations ($n = 579$) are reported above the diagonal. Descriptive analyses were conducted in SPSS using listwise deletion. Findings replicated (i.e., magnitude and direction) analyses conducted in *Mplus* V8 using Maximum Likelihood Estimation with Robust Standard Errors.

* $p < .05$. ** $p < .01$.

Table 2*Prerequisite Latent Growth Analyses: Justification and Model Fit Indices*

Model Tested	Rationale	χ^2	df	p	CFI	RMSEA	SRMR
<i>Mothers' Models</i>							
Step 1- Unconditional Enculturation Model	Estimate mothers' enculturation trajectories	2.49	1	.115	.99	.04	.01
Step 1- Unconditional Acculturation Model	Estimate mothers' acculturation trajectories	.03	1	.860	1	.00	.00
Step 2- Parallel Enculturation & Acculturation Model	Capture concurrent nature of mothers' enculturation & acculturation trajectories	2.81	4	.590	1	.00	.01
Step 3- Parallel Model with Mother Nativity as Covariate	Acknowledge parent nativity differences in mothers' acculturation & enculturation trajectories	5.30	8	.724	1	.00	.01
<i>Fathers' Models</i>							
Step 1- Unconditional Enculturation Model	Estimate fathers' enculturation trajectories	.25	3	.969	1	.00	.02
Step 1- Unconditional Acculturation Model	Estimate fathers' acculturation trajectories	2.91	1	.088	.99	.06	.01
Step 2- Parallel Enculturation & Acculturation Model	Capture concurrent nature of fathers' enculturation & acculturation trajectories	7.89	8	.444	1	.00	.03
Step 3- Parallel Model with Father Nativity as Covariate	Acknowledge parent nativity differences in fathers' acculturation & enculturation trajectories	14.70	15	.474	1	.00	.06

Note. Mothers' models ($N = 749$); Fathers' models ($n = 579$). The freely estimated fathers' unconditional model revealed a non-positive latent variable covariance matrix associated with the enculturation linear slope. The enculturation slope variance was [$\psi_{\beta\beta} = .00$, $SE = .00$, $p = .907$]; therefore, model specification was modified to fix the slope at 0, thus, covariances involving the enculturation slope were fixed at 0. The estimated parallel model with father nativity as a covariate revealed a non-positive latent variable covariance matrix associated with the acculturation linear slope. The acculturation slope variance was [$\psi_{\beta\beta} = -.00$, $SE = .00$, $p = .414$]; therefore, model specification was modified to fix the slope at 0, thus, covariances involving the acculturation slope were fixed at 0.



*Figure 1. HYPOTHESIS 2 TEST: Parallel process model of mothers' value-based enculturation and acculturation with intercepts interaction (5th grade levels of each trajectory) predicting their adolescents' bicultural competence ($N = 749$). Mothers' nativity was included as a predictor of the growth factors (i.e., intercepts and slopes) but is not included in the figure for ease of presentation. Black dot represents the interaction term. α = Intercept. β = Slope. ENC = Enculturation. ACC = Acculturation. Completely standardized coefficients reported (STDYX in *Mplus*). Standard errors are reported in parentheses. Only significant coefficients are shown to enhance clarity. Black solid lines represent significant paths. Black dash lines represent non-significant paths ($p > .05$). Grey solid lines represent fixed parameters. Grey dash lines represent correlations involving growth factors with no variability.*

* $p < .05$. ** $p < .01$.

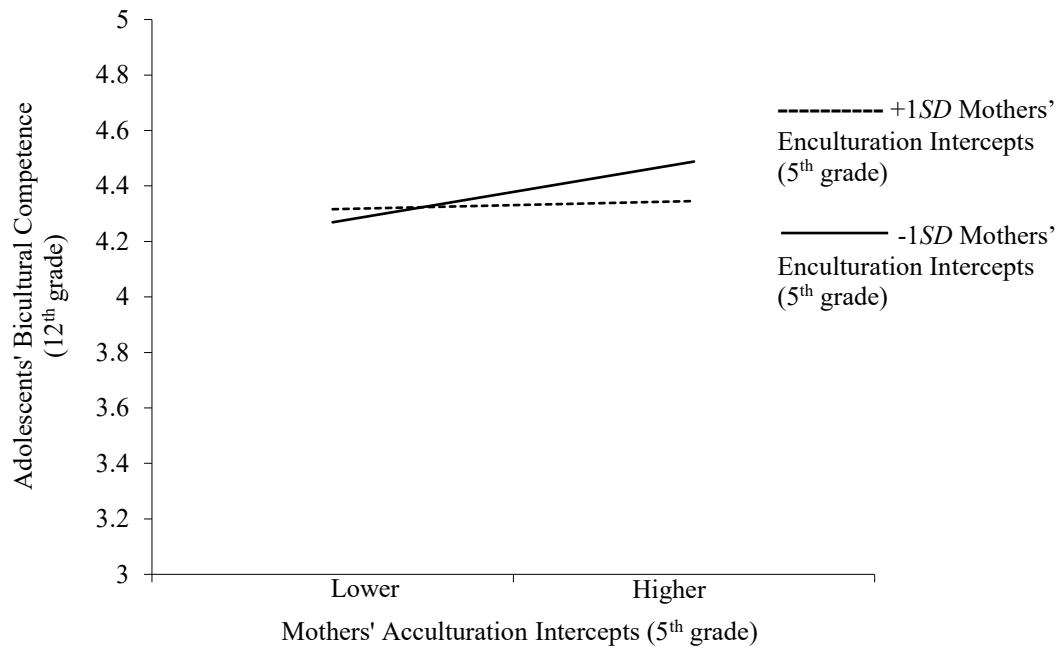


Figure 2. Interaction graph depicting the influence of mothers' 5th grade value-based enculturation ($+1SD \geq 4.70$, $-1SD \leq 4.10$) on the association between mothers' 5th grade value-based acculturation and adolescents' 12th grade bicultural competence. Y-axis scale ranges across values up to 1SD above and below the mean.

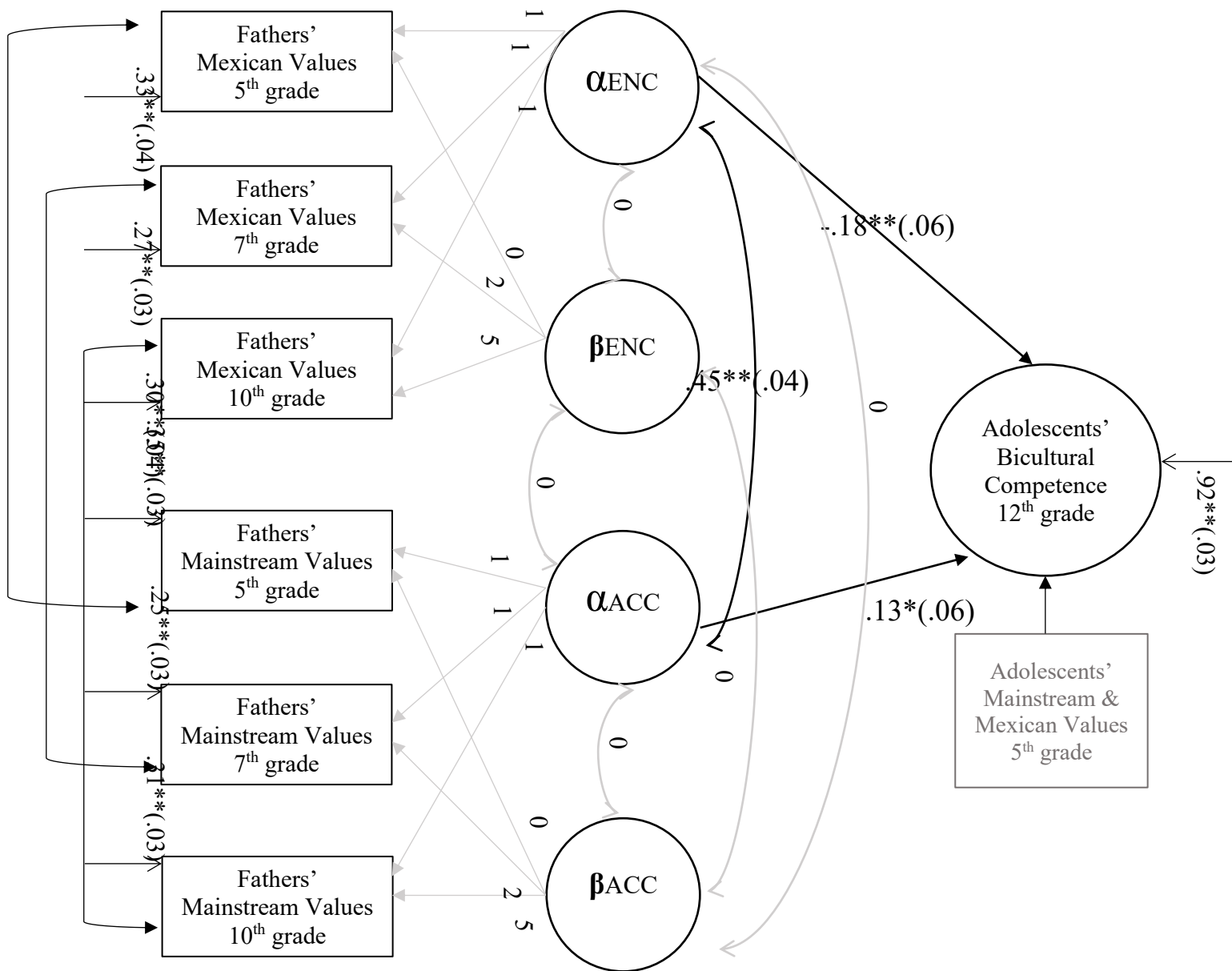


Figure 3. HYPOTHESIS 1 TEST: Parallel process model of fathers' value-based enculturation and acculturation predicting their adolescents' bicultural competence ($n = 579$). Fathers' nativity was included as a predictor of the growth factors (i.e., intercepts and slopes) but not included in the figure for ease of presentation. 5th Grade family annual income was included as an auxiliary variable. α = Intercept. β = Slope. ENC = Enculturation. ACC = Acculturation. Completely standardized coefficients reported (STDYX in *Mplus*). Standard errors are reported in parentheses. Only significant coefficients are shown to enhance clarity. Black solid lines represent significant paths. Grey solid lines represent fixed parameters. Model fit: $\chi^2(50) = 74.11, p = .015$; CFI = .99, RMSEA = .03; SRMR = .05.

* $p < .05$. ** $p < .01$.