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Acculturation and Enculturation Trajectories Among Mexican-American Adolescent Offenders

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Abstract

This study examines changes over time in ethnic affirmation/belonging and ethnic identity achievement, Spanish language use, English language use, Mexican/Mexican-American affiliation/identification and Anglo affiliation/identification in a sample of Mexican-American adolescents participating in a longitudinal study of juvenile offenders. The Multigroup Ethnic Identity Measure and the Acculturation Rating Scale for Mexican Americans-II were completed by the Mexican-American adolescents 7 times over a 3-year period. The findings from longitudinal growth modeling analyses and growth mixture modeling analyses indicate that there is heterogeneity in the initial scores and changes over time on these variables that are related to markers for the cultural qualities of the home environment (i.e., generational status and mother's most frequent language use). In contrast to expectations, *marginalized* or *assimilated* acculturation trajectories/types were not overrepresented in this sample of adolescent offenders. Implications for our understanding of the nature of acculturation and enculturation processes and the way these processes are studied are discussed.

As a result of immigration and birth rates the ethnic minority populations (i.e., Latinos, Asian Americans, etc.) in the United States are rapidly increasing in absolute and relative size (U.S. Census Bureau, 2004). Further, for some ethnic minority groups, increased exposure to the mainstream culture of the United States has been associated with increased delinquency (Buriel, Calzada, & Vasquez, 1982; Fridrich & Flannery, 1995; Samaniego & Gonzalez, 1999; Vega, Khoury, Zimmerman, Gil, & Warhaheit, 1995; Wall, Power, & Arbona, 1993) and poor mental health (Hovey & King, 1996; Katragadda & Tidwell, 1998; Rasmussen, Negy, Carlson, & Burns, 1997; Rogler, Cortes, & Malgady, 1991). Several authors (e.g., Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002; Szapocznik & Kurtines, 1993) suggest that the

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demands to adapt to both the mainstream and ethnic cultures experienced by ethnic minority youths may create challenges that place them at risk for negative mental health outcomes (i.e., depression, low self-esteem, or conduct problems) and negative life outcomes (i.e., school failure, drug and alcohol abuse, juvenile delinquency, and financial instability). That is, ethnic minority individuals may be at greater risk because they are often expected to adhere to many of the behavioral expectations and values of the ethnic culture in their home and proximal neighborhood while at the same time they are expected to adhere to the behavioral expectations and values of the mainstream culture at school and in the broader community.

Although some (e.g., Berry, 2006) describe this dual cultural adaptation under the rubric of acculturation, we describe this dual cultural adaptation as occurring through the processes of acculturation and enculturation (Gonzales et al., 2002; Knight, Jacobson, Gonzales, Roosa, & Saenz, 2009) to differentiate those forces promoting mainstream adaptation from those forces promoting ethnic adaptation. Acculturation is the process of the adaptation of an individual to the mainstream culture, while enculturation is the process of adaptation to the ethnic culture. Although acculturation and enculturation processes are separable, they are not independent or orthogonal, and lead to outcomes in which an individual may achieve any combination of levels along each. For example, Berry (2006) theorizes four distinct types of acculturation/enculturation outcomes: *biculturalism* (high acculturation and high enculturation; sometimes referred to as *integration*), *assimilation* (high acculturation and low enculturation), *separation* (low acculturation and high enculturation; sometimes referred to as *withdrawn*), and *marginalization* (low acculturation and low enculturation; sometimes referred to as *alienation*).

These dual cultural adaptations produce changes over time in a wide array of psychosocial dimensions including knowledge, behaviors, beliefs, attitudes, values, and self-concept broadly conceived (e.g., Berry, 2006; Cuellar, Arnold, & Maldonado, 1995; Félix-Ortiz, Newcomb, & Myers, 1994; Gonzales et al., 2002; Knight et al., 2009; LaFramboise, Coleman, & Gerton, 1993; Rudmin, 2003; Tsai, Chentsova-Dutton, & Wong, 2002). These adaptations occur through developmental and socialization processes (broadly defined) that unfold throughout the life span of ethnic minorities that have been in the United States for several generations as well as those who have recently immigrated. Much, but not all, ethnic socialization occurs in the family and ethnic community. Much, but not all, mainstream socialization occurs in schools, mainstream community, and media that convey the knowledge, behaviors, attitudes/beliefs, expectations, and values of the mainstream culture. There is, however, tremendous variability in the degree of ethnic and mainstream socialization pressure individuals experience in their normal daily lives.

Although the assessment of acculturation/enculturation status in the literature has often focused heavily on language use as a proxy, the nature of the changes produced by these dual cultural socialization experiences may be dependent on the developmental state of the individual (e.g., Knight et al., 2009). During early childhood, acculturation and enculturation may be manifest in changes in relatively simple behaviors (e.g., native language/English language use and proficiency, parent-directed ethnic/mainstream social interactions) and knowledge (e.g., ethnic/mainstream traditions and celebrations). During adolescence and young adulthood, these changes may be manifest in more complex volitional behaviors (e.g., preferences to speak the native language/English and to interact with ethnic/mainstream persons, identity exploration) and values (e.g., familism and respect for family members).

The developmental state of an individual may also influence the rate at which acculturative and enculturative changes occur and the social spheres that are most salient as sources of cultural influence. For example, relative to their parents, immigrant children and adolescents often experience more rapid rates of acculturative changes in developmentally appropriate

dimensions (e.g., use of English) and associated changes in their mainstream social identities, because they attend schools in the United States and have extended daily interactions with mainstream peers and teachers (Portes & Rumbaut, 1996; Szapocznik & Kurtines, 1993). Hence, one's developmental state at the time of immigration (i.e., the beginning of long-term contact with the mainstream culture) may influence the rate of change in cultural orientation. However, one's developmental state may also impact the rate of dual cultural adaptations throughout development as the individual reaches periods of developmental readiness and developmentally appropriate roles and contexts. For example, late childhood and early adolescence may represent a developmental period in which the internalization of culturally related values may occur most efficiently. Similarly, older adolescents, relative to young adolescents, may have a more highly developed mainstream social identity because they are more apt to be influenced by their peers and mainstream community and because of increased involvement in social groups outside the home (Ying, Coombs, & Lee, 1999). Adults, on the other hand, have greater abilities to structure their own cultural experiences. Some ethnic adults, for example, may limit their involvement in or be excluded from mainstream social settings and consequently experience much slower rates of acculturative change relative to children and adolescents.

Although the evaluation of the key elements of this conceptualization truly requires longitudinal research (i.e., to assess change), most of the relevant research has relied on cross-sectional comparisons of individuals of different ages (e.g., Phinney, 1989) or from families that differ in generational status to estimate change (Knight & Kagan, 1977; Unger et al., 2002). The cross-sectional comparisons of different aged individuals are worrisome because they usually involve samples from educational institutions even though there is a relatively substantial school dropout rate among Mexican-American adolescents (U.S. Department of Education, 2000) and college samples are highly selective. Given that the school dropout rates increase across grades and that the decision to drop out, or go to college, may be associated with the degree of success with dual cultural adaptation, cross-sectional differences among Mexican-American adolescentsmay not accurately reflect acculturative and enculturative changes. These cross-sectional comparisons of different generational groups, as well as the comparison of immigrant and nonimmigrant individuals, are worrisome because these markers of experiences within the United States are confounded with the historical reasons for immigration, regional differences within the country of origin, and the likelihood of having a dual cultural perspective (i.e., the ability to compare their U.S. experience with experience in their country of origin; see Suárez-Orozco & Suárez-Orozco, 1996). Unfortunately, there have been only three longitudinal examinations of the changes over time associated with this dual cultural adaptation (French, Seidman, Allen, & Aber, 2006; Pahl & Way, 2006; Phinney & Chavira, 1992), none of which assessed both acculturative and enculturative changes, nor did any have a large enough sample of any single ethnic group to examine changes within an ethnic group.

Perhaps one of the best available attempts to assess acculturative and enculturative outcomes is the research conducted by Coatsworth, Maldonado-Molina, Pantin, and Szapocznik (2005). These researchers used a conceptually anchored system to classify Hispanic adolescents into acculturation/enculturation types using a modified version of the Bicultural Involvement Questionnaire (BIQ; Szapocznik, Kurtines, & Fernandez, 1980) that assessed both acculturative status and enculturative status. The modified version of the BIQ utilized a 5-point response scale in which item scores between 4 and 5 indicate highly comfortable behaviors (either ethnic or mainstream depending on the item) while scores between 1 and 2 indicate not at all comfortable behaviors. The low-income inner-city Hispanic adolescents were largely classified as *bicultural*, *assimilated*, or *moderate* (i.e., scoring in the middle range on the Hispanicism and Americanism scales). *Bicultural* adolescents were those who indicated that they were on average highly comfortable (i.e., scoring between a 4 and a 5) with both

ethnic behaviors (e.g., speaking Spanish) and mainstream behaviors (e.g., speaking English). In this sample of 315 Hispanic adolescents, only one adolescent met the conceptually defined criteria to be classified as *marginalized* (on average not at all comfortable, i.e., between a 1 and a 2, with either ethnic or mainstream behaviors). Unfortunately, this research was not longitudinal and could not assess changes associated with acculturative and enculturative experiences.

The primary purpose of this study is to identify trajectories of acculturative and enculturative changes among 14–17-year-old Mexican-American juvenile offenders over a 3-year time period using longitudinal growth curve modeling and growth mixture (GM) modeling. This age range corresponds to the developmental period in which maximal development of ethnic identity is expected (e.g., Phinney, 1989). The examination of these trajectories in a sample of juvenile offenders may be particularly informative if juvenile delinquency is related to having difficulties with the dual cultural adaptations associated with acculturation and enculturation. If Mexican-American juvenile offenders have experienced substantial difficulties in their dual cultural adaptation, they may be more likely to become relatively *marginalized*. Given that the available longitudinal evidence and the Coatsworth et al. (2005) findings provide little or no evidence of individuals becoming *marginalized*, a sample of juvenile offenders may represent a subset of the Mexican-American adolescent population that is more likely to include such individuals. Indeed, *marginalized* Hispanic adolescents may have self-selected out of the low-income inner-city community sample examined by Coatsworth et al. (2005) by not consenting to participate in their research. Alternatively, it may be that many Mexican-American juvenile offenders are becoming relatively *assimilated*, given the evidence that *assimilated* Hispanic youth are more likely to engage in problem behaviors (e.g., Coatsworth et al., 2005) and the literature relating contact with the mainstream culture to delinquency (Buriel et al., 1982; Fridrich & Flannery, 1995; Samaniego & Gonzalez, 1999; Vega et al., 1995; Wall et al., 1993).

Hence, this sample of Mexican-American juvenile offenders may well be overrepresented with individuals becoming *marginalized* and/or *assimilated* and underrepresented with individuals becoming *biculturals*.[1] Specifically, we examine the longitudinal growth curves and GM trajectories from assessments of ethnic affirmation/belonging and ethnic identity achievement (using the Multigroup Ethnic Identity Measure [MEIM]; Phinney, 1992) and Spanish language use, English language use, Mexican/Mexican-American affiliation/identification and Anglo affiliation/identification (using the Acculturation Rating Scale for Mexican Americans [ARSMA]; Cuellar et al., 1995) in a sample of Mexican-American adolescents participating in a longitudinal study of juvenile offenders.

Secondarily, we wanted to determine the degree to which heterogeneity in the observed acculturation/enculturation trajectories is associated with indicators of exposure to ethnic socialization. The theoretical perspective focusing on dual cultural adaptation (e.g., Gonzales et al., 2002; Knight et al., 2009) suggests that there may be heterogeneity in the developmental changes associated with acculturation and enculturation within an ethnic group and that this heterogeneity may be associated with ethnic socialization and the cultural orientation/qualities of the home and family. For example, Knight, Cota, and Bernal (1993) found that mother's ethnic background was related to her teaching about Mexican culture, which in turn was related to her child's ethnic self-identification, ethnic knowledge, and ethnic preferences in a sample of Mexican-American families. Umaña-Taylor and Fine (2004) found that familial ethnic socialization was related to ethnic identity achievement (ethnic behaviors, ethnic affirmation/

[1]It is difficult to develop an expectation regarding the frequency of *separated* adolescents, because data collection was conducted only in English, which could result in fewer *separated* adolescent participants than may have occurred if monolingual Spanish speakers were in the sample. However, Coatsworth et al. (2005) found that a very small percentage of their more normative sample were *separated*.

belonging, identity achievement) in an ethnically diverse sample. Kiang (2005) found that familial socialization was related to ethnic identity among Chinese-American college students and adults. Hence, we examined the relations of the observed acculturation/enculturation trajectory groups to the only indicators of the cultural orientation of the home/family available in this longitudinal study of juvenile offenders (i.e., generational status and whether or not the mother mostly speaks Spanish).

METHOD

Participants

The sample consisted of 332 English-speaking Mexican/Mexican-American adolescents from Phoenix, AZ. These participants were a subsample of the 1,354 adolescents (654 in Phoenix and 700 in Philadelphia) enrolled in an ongoing longitudinal study of juvenile offenders (the Research on Pathways to Desistance Project; Mulvey et al., 2004). The Mexican-American sample was 90% (n = 300) male with an average age of 16.4 years (age range = 13.7–18.3 years) at the time of the baseline interview. The retention rates of the Mexican-American adolescent participants have been excellent with 93–100% completing these measures at each of seven assessments (with an overall average of 95% inclusion). The seven assessments were conducted over a 3-year time period with assessments approximately every 6 months. Approximately 79% of these participants spent an average of just under 1 year in a secure facility (i.e., prison, jail, or detention) at varying times during the 3-year assessment period. However, the participants were in the community for 64% of the person-months covered by this study. A detailed report on recruitment, procedures, and sample representativeness for the broader sample is available (Schubert et al., 2004).

Procedure

These adolescents were recruited after a review of court files indicated that they had been adjudicated of a serious offense. Upon obtaining juvenile and parent/guardian informed consent, the adolescents were interviewed within 75 days of their adjudication in the juvenile system (or within 90 days of an adult arraignment if in the Arizona adult system) and then interviewed every 6 months. Because drug violations represent such a significant proportion of the offenses committed by this age group, and because males account for the vast majority of those cases (Snyder, 2003), the proportion of juvenile males recruited with a history of drug offenses was capped at 15% of the full sample at each site so that the heterogeneity of the sample would not be compromised. The cap did not apply to those adolescents who were processed in the adult criminal system (20% of the Phoenix sample). Data were collected with computer-assisted interviews and were conducted in a variety of locations including participants' homes, public places such as libraries, or correctional/treatment facilities. Trained interviewers read each item aloud and responses were either verbal or entered via a keypad (where permissible) in order to maximize privacy. The interviews took about 2 hr to complete (with the exception of the baseline interview, which was about 2 hr/day on 2 consecutive days) and participant payments ranged from US$50 to US$150 depending on the interview period.

Measures

MEIM—At each time point each adolescent completed the MEIM (Phinney, 1992) with a response scale that ranges from 1 (*strongly disagree*) to 4 (*strongly agree*). The MEIM consists of 12 items assessing two dimensions of ethnic identity development (see Phinney, 2006; Roberts, Phinney, Masse, Chen, & Roberts, 1999). Exploratory and confirmatory factor analyses of the assessment at baseline identified ethnic affirmation/belonging and ethnic identity achievement dimensions. The ethnic affirmation/belonging dimension consists of 7 items (i.e., "I am happy that I am a member of the group I belong to"; "I feel strong attachment towards my own ethnic group") assessing ethnic pride or positive feelings toward one's ethnic

group, as well as feeling a sense of belonging toward one's ethnic group. The ethnic identity achievement dimension consists of 5 items (i.e., "I have spent time trying to find out more about my own ethnic group"; "I am active in organizations or social groups that include mostly members of my own ethnic group") assessing an exploration process of one's identity, oriented to having a secure sense of one. Average scores were created at each time point for each MEIM dimension. A two-factor model with correlated factors fit the data well (comparative fit index [CFI] = .91) and the two subscales had acceptable reliabilities (α = .88 and .77 for the ethnic affirmation/belonging and ethnic identity achievement subscales, respectively).

ARSMA-Version II—At each time period each adolescent completed the ARSMA-II (Cuellar et al., 1995) with a response scale that ranges from 1 (*not at all*) to 5 (*extremely often or almost always*). The ARSMA-II consists of 30 items that were originally divided in two axes: 13 items for the American Orientation Scale and 17 items for the Mexican Orientation Scale. Exploratory and confirmatory factor analyses (CFI = .95) of the initial assessments identified a language and an affiliation dimension (i.e., subscale) within each axis. An English language use dimension consists of 8 items (i.e., "I speak English"; "I enjoy listening to English language music"; α = .77). An Anglo affiliation/identification dimension consists of 3 items (i.e., "I associate with Anglos"; "My friends now are of Anglo origin"; α = .82). A Spanish language use dimension consists of 9 items (i.e., "I speak Spanish"; "I enjoy listening to Spanish language music"; α = .93). Finally, a Mexican affiliation/identification dimension consists of 3 items (i.e., "I associate with Mexicans or Mexican Americans"; "My friends now are of Mexican origin"; α = .72). The remaining 7 items did not load on any dimension and were excluded. Average scores were created at each time point for each axis/dimension.

Culturally related family background variables—At the baseline interview each adolescent was asked, "What language does your mother/female guardian speak most often?" If the respondents answered Spanish they were classified as "mother mostly speaks Spanish." The generation status variable was coded based on the combined adolescent and baseline collateral (i.e., mother, father, or guardian) reports of the country of birth for family members. First-generation adolescents were born in Mexico and both parents were born in Mexico. Second-generation adolescents were born in the United States and both parents were born in Mexico. Third-generation adolescents were born in the United States, one or both parents were born in the United States, but at least one grandparent was born in Mexico. Fourth-generation adolescents, both parents, and all grandparents were born in the United States.

RESULTS

Based on our theoretical perspective (Gonzales et al., 2002; Knight et al., 2009), we expected each acculturation/enculturation variable to display a set of trajectory groups defined by a level at the 14–15-year-old age assessment (i.e., intercept), and a rate of change over the subsequent assessments (i.e., slope). To identify these developmental trajectories for each variable, trajectory analysis using latent growth curves (LGC) modeling and GM modeling was used (Muthén, 2004). All 332 cases were available for the GM modeling through the use of full information maximum likelihood method (Arbuckle, 1996) for handling missing data assuming ignorable missingness at random (Little & Rubin, 1987). Because the longitudinal growth curve modeling and the mixture growth modeling analyses were focused on age changes rather than measurement occasion, it was necessary to sort cases into seven age bands ranging from 14 years of age to 20 years of age (e.g., the 14-year-oldswere > 13.5 years of age but ≤ 14.5 years of age). The intercepts reported in all tables indicate the average scores that were estimated at the 14–15-year-old age band; however, in the LGC and GM analyses all variables were centered at the 17–18-year-old age band to ensure adequate variability to test for heterogeneity of intercepts (Raudenbush & Bryk, 2002).

A univariate LGC model was fit separately for each acculturation/enculturation variable, allowing linear and quadratic trends, using Mplus version 4.1 (Muthén & Muthén, 1998–2006). The quadratic terms were not significant in any analysis and were dropped from all models. These LGC analyses assess the degree to which the mean slope is significantly different from zero and whether there is significant variance in the intercepts and slopes. Once it was clear that there were significant differences in the individual intercepts and slopes, GM models were fit for the acculturation/enculturation variables in order to empirically identify trajectory groups. These analyses were designed to identify groups of individuals who were systematically changing comparably across age and who could be considered to be following a similar developmental trajectory. Individuals classified in a particular trajectory group resemble one another and the overall trajectory for their group more than they do another trajectory group. In this sense, they are following about the same developmental course and have distinctive characteristics from other groups of individuals following different developmental courses (Nagin & Tremblay, 2005; Piquero, 2007). Because of the cohort-sequential nature of the sampling procedure, the GM modeling allowed for the identification of trajectory groups across the 14-year-old to 20-year-old age range (see McCartney, Burchinal, & Bib, 2006, for a brief and nontechnical description of LGC and GM modeling approaches and their utility).

Once these trajectory groups were identified, the associations among the trajectory groups and the associations among the trajectories and culturally related family background variables (e.g., generational status, and mothers' Spanish use) were examined. Finally, because the empirically identified trajectory groups did not reveal individuals that could be characterized as *marginalized*, and to allow for comparison with findings from a more normative sample, all adolescents were classified into conceptually based trajectory types. This classification system (similar to that developed by Coatsworth et al., 2005) was adapted to take changes over age into consideration, in a manner consistent with theory. The associations among these conceptually based trajectory types and culturally related family background variables (e.g., generational status and mothers' Spanish use) and the trajectory groups were also examined.

LGC Models

Table 1 presents the results for the LGC univariate models for each outcome. The CFI ranges from .93 to .99 and the root mean squared error of approximation from .03 to .07, suggesting a good fit to the data (Rigdon, 1996). The univariate LGC models of the MEIM subscales indicate that ethnic affirmation/belonging is moderately high at the 14–15-year-old age band and increasing over time, and ethnic identity achievement is moderate at the 14–15-year-old age band and relatively stable over time. For example, the mean intercept for the ethnic affirmation/belonging scale is 3.02 and the mean slope is significant and .02 in magnitude. This means that the expected mean ethnic affirmation/belonging score at age 14 is 3.02 (on a 4-point scale) and the expected change is .02 scale points per year. However, the significant variance of the intercepts and slopes indicates that there are significant individual differences in the intercepts and slopes. The univariate LGC models of the ARSMA-II subscales indicate that Spanish language use is moderate at the 14–15-year-old age band and stable over time, English language use is high at the 14–15-year-old age band and stable over time, Mexican affiliation/identification is high at the 14–15-year-old age band and stable over time, and Anglo affiliation/identification is moderate at the 14–15-year-old age band and stable over time. Moreover, the univariate LGC models indicated significant intercept and slope variability for all dimensions (all ps<.0001 for intercepts and slopes variances), suggesting that there is a significant heterogeneity across individuals that could be examined using a GM approach to identify trajectory groups. Table 1 also presents the mean and standard deviation for all participants (ranging from 14 to 17 years of age) at the initial assessment. Approximate means

at each age can be determined by adding the product of the slope times the number of years over 14 to the intercept.

GM Models

The individual trajectories for each of the 332 Mexican-American adolescent offenders were used to estimate GM models that generate probabilities of group membership for each individual and to identify the number of trajectory groups.[2] Because of the conceptual linkages among the acculturation/enculturation dimensions, the GM modeling approach was applied to three pairs of dimensions (i.e., ethnic affirmation/belonging and ethnic identity achievement, Spanish and English language use, Mexican and Anglo affiliation/identification).[3] The first task in identifying the unique trajectories embedded within a large number of individual's intercepts and slopes is to determine the likely number of different trajectory groups. Six statistical criteria were examined to determine the optimal number of trajectory groups for each pair of acculturation/enculturation variables (Jones & Nagin, 2007): (1) the Bayes information criterion (BIC: the lower the BIC the better the fit; Schwartz, 1978;Sclove, 1987), (2) the entropy score (an entropy score close to 1 indicates a better fit), (3) the Lo–Mendell–Rubin test (a small *p*-value indicates better fit; Lo, Mendell, & Rubin, 2001), (4) the parametric bootstrap likelihood ratio test (a small value indicates better fit; Nylund, Asparouhov, & Muthén, 2007), (5) all trajectory groups consisting of a reasonable proportion of the sample (at least 5% is a common rule of thumb), and (6) the probabilities of highest trajectory group membership being at least .85. Again, approximate means for each trajectory group at each age can be determined by adding to the intercept the product of the slope times the number of years over age 14.

For ethnic affirmation/belonging and ethnic identity achievement, the three trajectory group solution resulted in the best combination of the five selection criteria. The BIC is comparatively low (BIC = 3,074.71), the Lo–Mendell–Rubin test is low ($p = .014$), the parametric bootstrap likelihood ratio test is low ($p<.001$), the entropy is high ($E = .85$), the percent of group membership is >5% (ranges from 14.4% to 62.7%), and the average probability of group membership is high (ranges from .93 to .95). The first trajectory group represents 76 Mexican-American adolescents who scored high in ethnic affirmation/belonging and ethnic identity achievement at the 14–15-year-old age band (intercepts = 3.45 and 2.94, respectively), and who are significantly increasing (slopes = .04 and .04, respectively) in both dimensions over time (identified as *high developing ethnic identity*; see Figure 1a). Thus, the GM modeling indicates that these 76 Mexican-American adolescents have a similar trajectory of change and their expected ethnic affirmation/belonging and ethnic identity achievement at age 14–15 years are 3.45 and 2.94, respectively (quite high on a 4-point scale) and that their expected change is .04 scale points per year on each variable between 14 and 20 years of age. The second group represents 208 Mexican-American adolescents who are moderately high (intercept = 3.00) and significantly increasing (slope = .02) in ethnic affirmation/belonging and moderate (intercept = 2.53) and stable (slope = −.01) in ethnic identity achievement over time from the 14–15-year-old age band (identified as *moderately high ethnic identity*; see Figure 1a). The third group represents 48 Mexican-American adolescents who are moderately low in ethnic affirmation/belonging and ethnic identity achievement at the 14–15-year-old age band (intercepts = 2.59 and 1.99, respectively) and stable (slopes = −.02 and −.02, respectively) in both dimensions over time (identified as *moderate ethnic identity*; see Figure 1a).

[2]GM models including only the male Mexican American offenders produced virtually identical findings.

[3]The variance for the intercepts and slopes was fixed to zero to make these models congruent to the semiparametric analytic strategy based on finite mixture models (Heckman & Singer, 1982; Jones, Nagin, & Roeder, 2001; Muthén, 2004). Also, we did not conduct GM models simultaneously for the six acculturation/enculturation variables because of the computational demands associated with this analysis and the current sample size.

For Spanish and English language use, the three-group solution resulted in the best combination of the five selection criteria. The BIC is comparatively low (BIC = 4,609.38), the Lo–Mendell–Rubin test is low ($p<.001$), the parametric bootstrap likelihood ratio test is low ($p<.001$), the entropy is high ($E = .93$), the percent of group membership is >5% (ranges from 24.6% to 49.1%), and the average probability of group membership is high (ranges from .95 to .98). The first group represents 82 Mexican-American adolescents who are high in Spanish and English use at the 14–15-year-old age band (intercepts = 4.06 and 4.33, respectively), and are significantly increasing in Spanish use (slope = .05) and stable in English use (slope = .04) over time (identified as *bilingual*; see Figure 1b). The second group represents 87 Mexican-American adolescents who are moderate in Spanish use and high in English use at the 14–15-year-old age band (intercepts = 2.87 and 4.12, respectively) and who are stable (slopes = .05 and −.02, respectively) over time (identified as *primarily English*; see Figure 1b). The third group represents 163 Mexican-American adolescents who are low in Spanish use and high in English use at the 14–15-year-old age band (intercepts = 1.55 and 4.64, respectively), and stable in Spanish use (slope = .01, nonsignificant) and slightly declining in English use (slope = −.03) over time (identified as *monolingual English*; see Figure 1b).

For Mexican and Anglo affiliation/identification, the two-group solution resulted in the best combination of the five selection criteria. The BIC is comparatively low (BIC = 5,633.15), the Lo–Mendell–Rubin test is low ($p<.001$), the parametric bootstrap likelihood ratio test is low ($p<.001$), the entropy is moderately high ($E = .77$), the percent of group membership is >5% (37.9% and 62% for the two groups), and the average probability of group membership is high (.94 and .92). The first group represents 126 Mexican-American adolescents who are high in Mexican affiliation/identification (intercept = 4.57) and moderately low in Anglo affiliation/identification (intercept = 2.35) at the 14–15-year-old age band, and stable (slopes = .01 and −.04, respectively) in both dimensions over time (identified as *primarily Mexican*; see Figure 1c). The second group represents 206 Mexican-American adolescents who are moderately high in Mexican affiliation/identification and moderate in Anglo affiliation/identification at the 14–15-year-old age band (intercepts = 4.06 and 3.41, respectively), and stable (slopes =−.01 and −.02, respectively) over time (identified as *dual cultural*; see Figure 1c).

Cross-Classifications of the Acculturation/Enculturation Trajectory Groups

To explore the interrelations among the acculturation/enculturation trajectory groups, χ^2-tests of association were conducted. The results for the χ^2-tests indicated a significant relationship between the ethnic affirmation/belonging and ethnic identity achievement trajectory groups and the Spanish and English language use trajectory groups, $\chi^2(4) = 38.70$, $p<.001$, $\phi = .34$, and the Mexican and Anglo affiliation/identification trajectory groups, $\chi^2(2) = 27.57$, $p<.001$, $\phi = .29$. Table 2 presents the cross-classification frequencies for each combination of trajectory groups. These associations indicate that those adolescents in the *high developing ethnic identity* group, compared with those adolescents in the *moderate ethnic identity* group, are more likely to be *bilingual* (either fully or partially), less likely to be *monolingual English*, more likely to be *primarily Mexican* in affiliation/identification, and less likely to be *dual cultural* in affiliation/identification. Further, those adolescents in the *moderately high ethnic identity* group fall between the other two groups.

The χ^2-test results also indicate a significant relationship between the Mexican and Anglo affiliation/identification trajectory groups and the Spanish and English language use trajectory groups, $\chi^2(2) = 18.86$, $p<.001$, $\phi = .24$ (see Table 2). This association indicates that fully *bilingual* Mexican-American adolescents, compared with *monolingual English* speakers, are more often *primarily Mexican* and less often *dual cultural* in affiliation/identification.

Cross-Classifications of the Trajectory Groups With the Family Background Variables

To explore the relations of the culturally related family background variables (generational status and mother's Spanish use) and the acculturation/enculturation trajectory groups, χ^2-tests of association were conducted. Generation status was significantly associated with the ethnic affirmation/belonging and ethnic identity achievement trajectory groups, $\chi^2(6) = 21.03$, $p = .002$, $\phi = .26$, with the language use trajectory groups, $\chi^2(6) = 144.14$, $p<.001$, $\phi = .68$, and the Mexican and Anglo affiliation/identification trajectory groups, $\chi^2(3) = 21.55$, $p<.01$, $\phi = .26$ (see Table 3). Mother's Spanish use was significantly associated with the ethnic affirmation/belonging and ethnic identity achievement trajectory groups, $\chi^2(2) = 8.33$, $p<.05$, $\phi = .16$, the Spanish and English language use trajectory groups, $\chi^2(2) = 139.11$, $p<.001$, $\phi = .65$, and the Mexican and Anglo affiliation/identification trajectory groups, $\chi^2(1) = 18.32$, $p<.001$, $\phi = .23$ (see Table 3). These associations indicate that those adolescents in the *high developing ethnic identity* group, compared with those adolescents in the *moderate ethnic identity* group, are more likely to be either first- or second-generation immigrants, less likely to be third- or higher-generation immigrants, and are more likely to come from homes in which the mother speaks mostly Spanish. Once again, those adolescents in the *moderately high ethnic identity* group fall between the former two groups. The *bilingual* (fully or partially) adolescents, compared with those who are *monolingual English*, are more likely to be first- and second-generation immigrants, less likely to be third- or higher-generation immigrants, and are more likely to come from homes in which the mother speaks mostly Spanish. Finally, those adolescents who are *primarily Mexican* in affiliation/identification, compared with those who are *dual cultural*, are more likely to be first- and second-generation immigrants, less likely to be third- or higher-generation immigrants, and are more likely to come from homes in which the mother speaks mostly Spanish.

Conceptually Based Classification of Acculturation/Enculturation Trajectory Types

Because the GM modeling results provided no evidence of individuals who scored low and/or were declining in the acculturation and enculturation dimensions (i.e., individuals becoming *marginalized*), we wanted to compare our participant's acculturation/enculturation changes with those experienced by more typical adolescents. However, since there are no GM model analyses of a more normative sample, we developed a modified form of the Coatsworth et al. (2005) classification system to allow such a comparison. To conceptually classify adolescents into acculturation/enculturation types we used the four enculturation dimensions (ethnic affirmation/belonging, ethnic identity achievement, Spanish language use, and Mexican affiliation/identification) and two acculturation dimensions (English language use and Anglo affiliation/identification) to place each adolescent into one of five acculturation types: the four theorized by Berry (2006) and the additional type (i.e., *moderate*) observed by Coatsworth et al. (2005).

Because these classifications were complicated by the multiple assessments of each dimension for every adolescent, two raters independently classified each youth by examining the total set of scores, the intercepts, and slope of change with age for each dimension to incorporate developmental changes into the classification system. Adolescents were classified as *bicultural* if they *generally* scored high (i.e., higher than 3 on the 4-point scales and higher than 3.5 on the 5-point scales) on both the enculturation and the acculturation dimensions. Adolescents were classified as *assimilated* if they generally scored high on the acculturation dimensions and substantially lower on the enculturation dimensions (i.e., with a considerable number of low scores: 2 or lower on the 4-point scales and 2.5 or lower on the 5-point scales). Adolescents were classified as *separated* if they generally scored high on the enculturation dimensions and scored substantially lower (i.e., low on both or low on one and moderate on the other) of the acculturation dimensions. Adolescents were classified as *marginalized* if they generally scored low on a majority of both the enculturation and the acculturation dimensions.

Finally, adolescents were classified as *moderate* if they generally scored in the middle range on a majority of both the enculturation and the acculturation dimensions. When an adolescent's scores on any dimension did not fit easily into one of these scoring ranges, we used the changes with age (i.e., the intercept and slope of their individual trajectory) to resolve uncertainty. For example, if half of an adolescent's Spanish language use scores were in the moderately high range (i.e., slightly below the 3.5 cut-point for a "high" score) and half were in the high range, the adolescent was considered high in Spanish use if the intercept was in the moderate range but the slope was substantially positive (i.e., if they were not initially high in Spanish use but became high in later assessments). The percent agreement in these classifications across the two raters was 86.1% and disagreements were resolved by consensus discussion.

Table 4 presents the percentage of the adolescents conceptually classified into each acculturation/enculturation type. Only four types are represented because no adolescents were consistently low enough in a majority of the enculturation and acculturation dimensions to be classified as *marginalized*). Given the necessity to use either the English or Spanish language in their daily lives, we considered the possibility that a truly *marginalized* individual might score relatively high in either Spanish language use or English language use. However, even allowing for this possibility and disregarding the language use dimensions, no adolescent consistently scored low on the remaining dimensions. Further, as is evident in Table 4, a substantial majority of the adolescents were classified as either *bicultural* or *moderate*, and relatively few adolescents were classified as *assimilated* or *separated*.

Cross-Classifications of the Trajectory Types With the Family Background Variables

To explore the relations between the culturally related family background variables (generational status and mother's Spanish use) and the conceptually based trajectory types, χ^2-tests of association were conducted. Generation status was significantly associated with the conceptual types, $\chi^2(9) = 31.30$, $p<.001$, $\phi = .32$ (see Table 5). Mother's Spanish use was also significantly associated with the conceptual types, $\chi^2(2) = 13.20$, $p<.05$, $\phi = .20$ (see Table 5). These associations indicate that the *bicultural* adolescents were spread across generation status and mother's Spanish language use, although somewhat less likely to be first generation, and from homes in which the mother speaks mostly Spanish. The *assimilated* adolescents were all third and higher generation and from homes in which the mother did not speak mostly Spanish. The *separated* adolescents were more likely to be first generation and from homes in which the mother speaks mostly Spanish. Finally, the *moderate* adolescents were more likely to be third and fourth generation and come from homes in which the mother did *not* speak mostly Spanish.

Cross-Classifications of the Trajectory Groups With the Trajectory Types

To explore the relations of the acculturation/enculturation trajectory groups and the conceptually based trajectory types, χ^2-tests of association were conducted. As can be seen in Table 6, the conceptual types were significantly associated with the ethnic identity trajectory groups, $\chi^2(9) = 134.30$, $p<.001$, $\phi = .64$, language use trajectory groups, $\chi^2(9) = 48.90$, $p<.001$, $\phi = .38$, and the affiliation/identification groups, $\chi^2(9) = 24.90$, $p<.001$, $\phi = .26$. These associations are largely what one would expect given that they are derived from the same data. The *bicultural* adolescents are less likely to be in the *moderate ethnic identity* trajectory group (i.e., the group lowest in ethnic identity) and are more likely to be in the *dual cultural* trajectory group. The *assimilated* adolescents are all in the *moderate ethnic identity* trajectory group (i.e., the lowest ethnic identity group), and mostly in the *dual cultural* trajectory group. The *separated* adolescents are almost all in the *moderately high ethnic identity* trajectory group and are mostly in the *bilingual* and *primarily Mexican* trajectory groups. The *moderate* adolescents are most likely to be in the *moderately high ethnic identity*, *monolingual English*, and *dual cultural* trajectory groups.

DISCUSSION

Neither the empirically derived, but conceptually labeled, GM trajectory groups nor the conceptually based trajectory types provide support for the notion that *marginalized* and/or *assimilated* adolescents may be overrepresented, and that *bicultural* adolescents may be underrepresented, among Mexican-American adolescent offenders. A substantial majority of these adolescents scored moderately high or higher in ethnic identity, high in ethnic affiliation/identification, and were classified as either *bicultural* or *moderate*. Although this sample is not representative of the broader Mexican-American population and the generalizability of the present findings to a nonoffender population is uncertain, both the trajectory groups and conceptually based trajectory types appear to be somewhat consistent with what one would expect in a more normative sample of Mexican-American adolescents.

Although there are no similar trajectory findings with which to compare the present group trajectories, there are similar conceptual classifications from a low-income inner-city community sample of Hispanic adolescents (Coatsworth et al., 2005). Coatsworth and colleagues found that a majority of their Hispanic adolescents were *bicultural* or *moderate*, and they identified only one *marginalized* adolescent and relatively few *separated* adolescents. Indeed, there has been considerable question regarding the existence of *marginalized* ethnic minority individuals as assessed in the present manner (e.g., Rudmin, 2003). Glass, Bieber, and Tkachuk (1996) found few marginalized Alaskan inmates; however, they believed that these men were unwillingly pushed to become part of the dominant culture and may have experienced substantial acculturative stress. The one substantial difference between the Coatsworth's findings and our findings is with regard to the relative frequency of *assimilated* adolescents. Coatsworth and colleagues found that 23.5% of their community sample was *assimilated* whereas only 3.3% of our sample of Mexican-American adolescent offenders was *assimilated*. This difference may well be the result of the differences in range of psychological assessments in the two studies (although Coatsworth and colleagues also sampled younger adolescents from multiple Latino groups). Coatsworth and colleagues assessed a narrow range of culturally related psychological dimensions. Indeed, approximately 70% of the items used in the Coatsworth et al. (2005) study have some elements of language use embedded within them. We assessed a broader set of psychological constructs, and a relatively smaller proportion of our items relied only on language use as an indicator. If we had classified our adolescent participants based solely on our language use items, nearly half would be classified as *assimilated* because many of our Mexican-American adolescent offenders were monolingual English speakers. Perhaps some of the *assimilated* Hispanic adolescents in the Coatsworth et al. (2005) study would have been classified differently if a broader range of culturally related psychological constructs had been administered.

In addition, the overall sample mean changes (and the standard deviations) from the baseline to the 24-month assessment on the MEIM dimensions are strikingly similar to those reported for middle adolescent Latinos in the French et al. (2006) school-based sample. Our sample of adolescent Mexican-American offenders also generally scored relatively high in ethnic affirmation/belonging and ethnic identity achievement, which is just what one would expect of typical older adolescents who should most often be near identity achievement (see Marcia, 1980; Phinney, 1989). The similarity of our pattern of findings with the Coatsworth et al. (2005) classifications and the French et al. (2006) mean changes suggest that we do not yet fully understand the linkage between acculturation/enculturation and negative behavioral outcomes such as delinquency. Hence, Mexican-American juvenile delinquents may not be more likely to be *marginalized* and the trajectory/types observed in this sample may not be very different from what one would observe in a more normative sample of Mexican-American adolescents. Nevertheless, developmental trajectory analyses with a more normative sample of Mexican-American adolescents are necessary to fully evaluate the generalizability of the

present findings beyond a population of Mexican-American juvenile offenders, some of whom are exposed to the unique cultural contexts within secured facilities, gangs, and delinquent peers.

Although these findings do not support the hypothesis that Mexican-American adolescent offenders are likely to be *marginalized* and/or *assimilated*, the developmental changes reflected in the observed trajectory groups, the heterogeneity in these changes, and the associations with the markers of the family cultural background, are generally consistent with the expectations based on our theoretical framework (Gonzales et al., 2002; Knight et al., 2009). With regard to the MEIM (Phinney, 1992) dimensions, a substantial group of these Mexican-American adolescents were quite high and increasing over time in ethnic affirmation/belonging and in ethnic identity achievement. Although these developmental increases appear to be quite modest (.04 scale point per year over a 6-year time period), this change is reasonably impressive given the high ethnic identity scores at the initial assessment. The largest group of adolescents was moderately high and increasing somewhat over time in ethnic affirmation/belonging but moderate and stable in ethnic identity achievement. Further, there was a small but substantial group of adolescents who were moderate and stable in both ethnic identity dimensions over time. Indeed, there was considerable diversity among this sample of Mexican-American adolescent offenders with regard to both the absolute level of, and the development of, ethnic identity as indexed by the MEIM. These longitudinal findings, and those provided by French et al. (2006), are reasonably consistent with Marcia's (1980, 1993) theoretical description of ego identity development. A substantial majority of our Mexican-American adolescents are increasing in ethnic affirmation/belonging and/or ethnic identity achievement, perhaps as a function of the increasing cognitive maturity associated with ego identity development. Also, adolescents in this age range should be in or near identity achievement (Marcia, 1980, 1993) and should be scoring, as they do, at the high ends of the ethnic affirmation/belonging and ethnic identity achievement scales.

Similar diversity among this sample of Mexican-American adolescent offenders was evident with regard to the ARSMA-II (Cuellar et al., 1995) dimensions. Three language use groups were identified: *bilingual*—those who scored high in both Spanish and English use; *primarily English*—those who scored high in English use and moderate in Spanish use; and *monolingual English*—those who scored high in English use and low (very near the bottom of the scale) in Spanish use. Since the study required completing measures in English, the sample did not include monolingual Spanish speakers. Further, the *bilingual* Mexican-American adolescents were increasing in Spanish use over time and the *monolingual English* Mexican-American adolescents were declining slightly in English use over time, albeit from a very high level. Two affiliation/identification groups were also identified: *primarily Mexican*—those who scored high and stable over time in Mexican/Mexican-American affiliation/identification and relatively low and stable over time in Anglo affiliation/identification; and *dual cultural*—those who scored moderate and stable over time in both Mexican/Mexican-American and Anglo American affiliation/identification. Although there were clearly different trajectory groups based on substantial differences in the absolute levels on each of these dimensions, overall the Mexican-American adolescent offenders were relatively stable over time in these language use and affiliation/identification dimensions. Likely, the developmental changes in the language dimensions, and perhaps the affiliation patterns, occur at a younger age. Hence, although the ARSMA-II was developed for use with Mexican-American adults, there may be a utility for administering this measure to children to identify the developmental changes in language use associated with acculturation and enculturation.

The associations of the observed empirically derived trajectories, and the conceptual types, with the markers of the family cultural background are also consistent with the evidence that family variables are related to identity development (see Marcia, 1993). The adolescents in the

high developing ethnic identity, *bilingual*, and *primarily Mexican* affiliation/identification trajectory groups are more likely to come from families in which either they or their parents were born in Mexico and have mothers who speak mostly Spanish. The *separated* adolescents were more likely, and the *assimilated* adolescents were less likely, to come from families in which either they or their parents were born in Mexico and have mothers who speak mostly Spanish. *Bicultural* adolescents were more evenly distributed across generation and mother's Spanish use. The *bicultural*, *separated*, and *moderate* adolescents, and the adolescents in the *high developing ethnic identity*, *bilingual*, and *primarily Mexican* trajectories, may be living in a context (i.e., family, school, close friends, and community broadly conceived; Oetting & Donnermeyer, 1998) that supports, and perhaps demands, the development of ethnic identity, bilingualism, and a strong Mexican/Mexican-American affiliation and identification, and may be appropriately responding to the demands. In contrast, the adolescents in the *moderate ethnic identity*, *monolingual English*, and *dual cultural* trajectory groups, and the *assimilated* typology, are more likely to come from families in which they and their parents were born in the United States with mothers who do not speak mostly Spanish. These adolescents may not be receiving the same supports/demands for developing a strong Mexican/Mexican-American ethnic identity or facility in Spanish. However, even these adolescents have a relatively high sense of Mexican/Mexican-American affiliation and identification along with a moderate Anglo American affiliation and identification.

The GM model findings (i.e., the trajectory groups) and the conceptual classification findings (modified to utilize changes over time in the classifications) are quite consistent even though the GM findings are based on very sample-specific inclusion criteria while the conceptual classifications rely completely on theoretically specified inclusion criteria. This consistency, and the lack of support for the expectation that many of these Mexican-American juvenile offenders would be low in both acculturation and enculturation (i.e. *marginalized*) or high in acculturation but low in enculturation (i.e. *assimilated*), suggests that this lack of support was not merely the result of the criteria used to identify acculturation/enculturation outcome types. Most importantly, the absence of *marginalized* adolescents, even though this is a sample in which one would expect to find such adolescents, along with the relative absence of such individuals in more normative samples (e.g., Coatsworth et al., 2005), leads to serious questions regarding the validity of the theoretically proposed *marginalized* category. It may well be that the social and environmental pressures are such that rejecting both the ethnic and mainstream cultures is very unlikely to happen. If so, it may well be better to characterize individuals along a continuum representing their degree of biculturalism and their direction of deviation from full biculturalism.

Given the current state of the acculturation/enculturation theory, it is clear that longitudinal assessments, particularly in more normative samples, are necessary because these are processes of cultural change (e.g., Berry, 2006; Cuellar et al., 1995; Félix-Ortiz et al., 1994; Gonzales et al., 2002; Knight et al., 2009; LaFramboise et al., 1993; Rudmin, 2003; Tsai et al., 2002). Unfortunately, a vast majority of the research on acculturation/enculturation has utilized single-point-in-time assessments, often comparing individuals of different ages, individuals who have immigrated with those who were born in the United States, or individuals from families of different generations in the United States. Although there have been some recent attempts to examine enculturative outcomes longitudinally (French et al., 2006; Pahl & Way, 2006; Phinney & Chavira, 1992), these attempts have been limited, among other ways, by the analytical methods utilized. That is, the recent theoretical perspectives on dual cultural adaptation also allow that individuals may be progressing toward quite different acculturative/enculturative outcomes depending on the cultural context in which they live. However, none of these three longitudinal studies utilized an analytical strategy capable identifying adolescents who may be developing along different trajectories. Hence, longitudinal data and analytical

strategies like GM modeling, such as in the present study, may be necessary to gain a better understanding of acculturation and enculturation processes.

Furthermore, the present findings appear to provide some support for the heavy reliance on language use as a proxy for examining acculturation and enculturation in the research literature (see Knight et al., 2009). For example, the Mexican-American adolescents who use Spanish frequently (i.e., the fully or partially bilingual trajectory groups) are most likely to be in the higher ethnic identity trajectory groups (see Table 2), in the bicultural trajectory type (see Table 6), first and second generation (see Table 3), and from homes where mothers speak mostly Spanish (see Table 3). However, there are also findings that suggest that such a strong reliance on language use as a proxy may not be an ideal strategy. For example, there are a considerable number of monolingual English-speaking adolescents in the higher ethnic identity trajectory groups. In addition, while some of the ethnic identity trajectory groups are changing over time in a manner similar to what would be expected based on theory, the language trajectory groups represent individuals who differ in their absolute level of Spanish and English use but are stable over time in these levels of usage. Indeed, the over-reliance on measures of language use and the relative dearth of longitudinal assessments may have allowed the lack of concordance between the individual's developmental status and the developmental relevance of the psychological dimensions being assessed to go unnoticed in the literature. As suggested earlier, it may be more appropriate to administer measures assessing acculturative and enculturative changes in knowledge and simple behaviors to young children and measures assessing attitudes, values, and self-concept to adolescents and adults.

The present findings are interesting because they appear to be relatively consistent with the little comparable evidence available on more typical Latino adolescents, using an analytical methodology that allows for individual variability in developmental trajectories as has been proposed in the recent theoretical perspectives. The implications of the present findings are twofold. First, we do not yet appear to fully understand the linkages between acculturation and enculturation processes and antisocial behavior and delinquency among Mexican-American adolescents. Hence, policy makers should be careful not to make presumptions regarding the utility of being highly acculturated, highly enculturated, or both in creating social policy. Second, longitudinal data matched with an analytical technique that can identify developmental trajectories and individual differences in development trajectories may be useful in advancing our understanding of the dual cultural adaptation processes. Longitudinal assessments of acculturative and enculturative changes, along with longitudinal assessments of antisocial behavior and delinquency, would be extremely helpful in advancing our understanding of the potential causal linkages between these constructs. Such longitudinal data allow for the use of prospective analyses (e.g., cross-lag panel modeling) to assist in establishing the direction of causality between acculturation/enculturation and antisocial tendencies.

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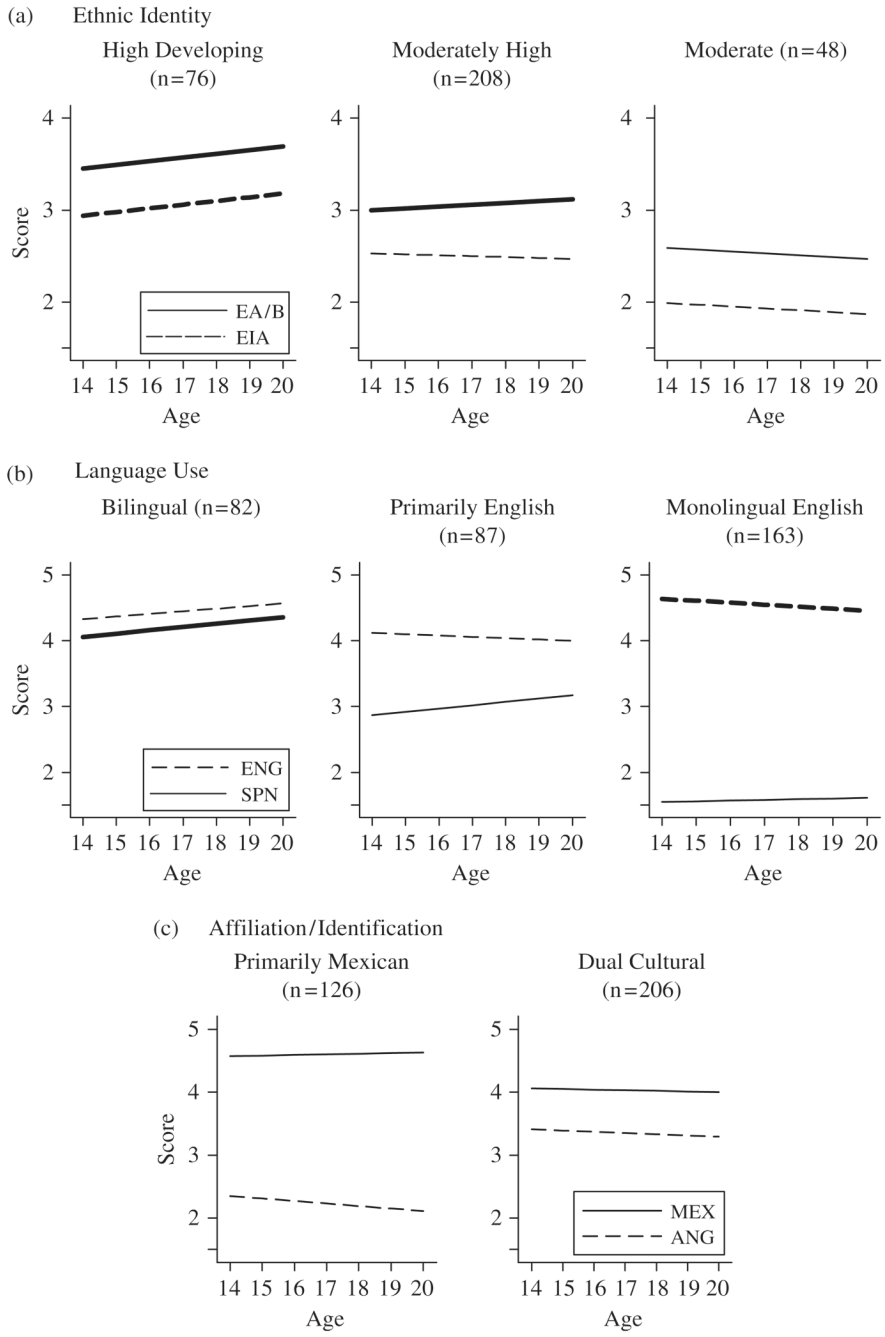

FIGURE 1. Trajectory groups for (a) ethnic identity, (b) language use, and (c) affiliation/identification

Note. Bold lines have slopes that are significantly different from zero. EA/B = ethnic affirmation/belonging; EIA = ethnic identity achievement; SPN = Spanish language use; ENG = English language use; MEX = Mexican affiliation/identification; ANG = Anglo affiliation/identification.

TABLE 1

Univariate Latent Growth Curve Models for the Acculturation/Enculturation Variables

Scale (Mean/Standard Deviation)[a]	Mean Intercept	Mean Slope	Variance Intercept	Variance Slope	$\chi^2(17)$	CFI	RMSEA
Ethnic affirmation/ belonging (3.11/0.50)	3.02***	.02***	0.12***	.01***	44.99***	.93	.07
Ethnic identity achievement (2.55/0.55)	2.53***	.01	0.14***	.01***	37.98***	.95	.06
Spanish language use (2.60/1.20)	2.59***	.00	1.25***	.05***	31.37*	.99	.05
English language use (4.49/0.56)	4.49***	−.01	0.14***	.01***	25.31**	.98	.04
Mexican affiliation/ identification (4.28/0.78)	4.28***	−.00	0.25***	.04***	33.11*	.97	.05
Anglo affiliation/ identification (2.88/1.04)	2.96***	−.02	0.44***	.03***	22.14	.99	.03

Notes. CFI = comparative fit index; RMSEA = root mean squared error of approximation.

N = 332. The intercepts reported indicate average scores at the 14–15-year-old age band.

[a]The mean and standard deviation at the first assessment.

*p <.05;

**p <.01;

***p <.001.

TABLE 2

Cross-Classification Among the Acculturation/Enculturation Trajectory Groups

	Ethnic Identity Trajectory Groups			Affiliation/Identification Trajectory Groups	
	High Developing Ethnic Identity *n* = 76	**Moderately High Ethnic Identity *n* = 208**	**Moderate Ethnic Identity *n* = 48**	**Primarily Mexican *n* = 126**	**Dual Cultural *n* = 206**
Language use trajectory groups					
Bilingual, *n* = 82	32 (42.11%)	47 (22.6%)	3 (6.25%)	47 (37.3%)	35 (17.0%)
Primarily English, *n* = 87	21 (27.63%)	61 (29.33%)	5 (10.42%)	32 (25.4%)	55 (26.7%)
Monolingual English, *n* = 163	23 (30.26%)	100 (48.08%)	40 (83.33%)	47 (37.3%)	116 (56.3%)
Affiliation/identification trajectory groups					
Primarily Mexican, *n* = 126	47 (60.0%)	70 (33.7%)	9 (18.8%)	—	—
Dual cultural, *n* = 206	29 (40.0%)	138 (66.35%)	39 (81.2%)	—	—

Note. Numbers in parentheses are percentages by columns. Numbers without parentheses are counts.

TABLE 3

Cross-Classification Among the Acculturation/Enculturation Trajectory Groups and the Family Background Variables

	Generation Status					Mothers Mostly Speak Spanish		
	First n = 46	**Second n = 65**	**Third n = 105**	**Fourth n = 93**	**Total**	**Yes n = 128**	**No n = 204**	**Total**
Ethnic identity trajectory groups								
High developing ethnic identity	12 (16.9%)	24 (33.8%)	20 (28.2%)	17 (21.1%)	73	35 (46.1%)	41 (53.9%)	76
Moderately high ethnic identity	30 (15.5%)	39 (20.2%)	68 (35.2%)	56 (29.0%)	193	83 (39.9%)	125 (60.1%)	208
Moderate ethnic identity	4 (8.9%)	2 (4.4%)	17 (37.8%)	22 (48.9%)	45	10 (20.8%)	38 (79.2%)	48
Language use trajectory groups								
Bilingual	30 (38.9%)	33 (42.9%)	13 (16.9%)	1 (1.3%)	77	65 (79.3%)	17 (20.7%)	82
Primarily English	14 (16.5%)	25 (29.4%)	30 (35.3%)	16 (18.9%)	85	51 (58.6%)	36 (41.4%)	87
Monolingual English	2 (1.4%)	7 (4.8%)	62 (42.2%)	76 (51.7%)	147	12 (7.4%)	151 (92.6%)	163
Affiliation/identification trajectory groups								
Primarily Mexican	28 (23.1%)	34 (28.1%)	29 (23.9%)	30 (24.8%)	121	67 (53.2%)	59 (46.8%)	126
Dual cultural	18 (9.6%)	31 (16.5%)	76 (40.4%)	63 (33.5%)	188	61 (29.6%)	145 (70.4%)	206

Note. Numbers in parentheses are percentages by rows. Numbers without parentheses are counts.

TABLE 4

Means (*SD*s) for Each Enculturation and Acculturation Dimension Scores for Each Conceptually Based Trajectory Type

	Trajectory Types N (%)			
	Bicultural 228 (68.7%)	**Assimilated 11 (3.3%)**	**Separated 16 (4.8%)**	**Moderate 77 (23.2%)**
Enculturation				
Affirmation/belonging	3.28 (0.32)	2.34 (.25)	3.05 (0.27)	2.78 (.31)
Identity achievement	2.70 (0.42)	1.79 (.28)	2.49 (0.37)	2.25 (.35)
Spanish use	2.80 (1.19)	1.28 (.39)	3.36 (1.20)	2.06 (.76)
Mexican affiliation/identification	4.43 (0.44)	3.17 (.90)	4.46 (0.41)	3.82 (.49)
Acculturation				
English use	4.56 (0.33)	4.61 (.32)	3.48 (0.47)	4.29 (.44)
Anglo affiliation/identification	2.91 (0.82)	3.79 (.63)	2.14 (0.54)	2.84 (.45)

Note. The range of means is 1–4 for affirmation/belonging and identity achievement dimensions and 1–5 for all other dimensions.

TABLE 5

Cross-Classification Among the Conceptually Based Trajectory Types and the Family Background Variables

	Generation Status					Mothers Mostly Speak Spanish		
	First n = 46	**Second n = 65**	**Third n = 105**	**Fourth n = 93**	**Total**	**Yes n = 128**	**No n = 204**	**Total**
Conceptual types								
Bicultural	31 (14.6%)	55 (25.9%)	64 (30.2%)	62 (29.3%)	212	94 (41.2%)	134 (58.8%)	228
Assimilated	0	0	6 (54.6%)	5 (45.4%)	11	0	11 (100.0%)	11
Separated	8 (50.0%)	1 (6.3%)	4 (25.0%)	3 (18.6%)	16	10 (62.5%)	6 (37.5%)	16
Moderate	7 (10.0%)	9 (12.9%)	31 (44.3%)	23 (32.9%)	70	24 (31.2%)	53 (68.8%)	77

Note. Numbers in parentheses are percentages by rows. Numbers without parentheses are counts.

TABLE 6

Cross-Classification Among the Trajectory Groups and the Trajectory Types

	Trajectory Type			
	Bicultural	**Assimilated**	**Separated**	**Moderate**
Ethnic identity trajectory groups				
High developing ethnic identity	74 (32.5%)	0	1 (6.3%)	1 (1.3%)
Moderately high ethnic identity	146 (64.0%)	0	13 (81.3%)	49 (63.6%)
Moderate ethnic identity	8 (3.5%)	11 (100.0%)	2 (12.5%)	27 (35.1%)
Language use trajectory groups				
Bilingual	72 (31.6%)	0	9 (56.3%)	1 (1.3%)
Primarily English	58 (25.4%)	0	3 (18.8%)	26 (33.8%)
Monolingual English	98 (43.0%)	11 (100.0%)	4 (25.0%)	50 (64.9%)
Affiliation/identification trajectory groups				
Primarily Mexican	97 (42.5%)	1 (9.1%)	12 (75.0%)	16 (20.8%)
Dual cultural	131 (57.5%)	10 (90.9%)	4 (25.0%)	61 (79.2%)

Note. Numbers in parentheses are percentages by columns. Numbers without parentheses are counts.