Cultural Profiles Among Mexican-Origin Girls: Associations With Psychosocial Adjustment

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Much of the cultural processes research has used single-domain measures of and approaches to cultural orientation, acculturation, and ethnic identity. The current study examined the latent cultural profiles that emerged from the intrapersonal (i.e., ethnic identity and generational status), interpersonal (i.e., language use), and familial (i.e., familial ethnic socialization) domains among 338 Mexican-origin girls in 7th (n = 170; M_age = 12.27, SD = .28; 63.6% U.S.-born) and 10th grades (n = 168; M_age = 15.21, SD = .46; 60.6% U.S.-born). Further, we examined how these profiles were associated with self-esteem, depressive symptoms, and discrimination. Four cultural profiles emerged from a latent profile analysis (i.e., strong-positive, strong-negative, Spanish-dominant low, and English-dominant low). Results indicated that the strong-positive profile (i.e., high on ethnic identity and familial ethnic socialization, bilingual, second generation) was most adaptive, in that this group had the highest self-esteem. Profiles did not differ in perceived discrimination or depressive symptoms. Results highlight the multifaceted nature of cultural profiles and suggest that affiliation with heritage culture across intrapersonal, interpersonal, and familial domains is beneficial for the psychosocial adjustment of Mexican-origin girls. Implications of the use of a multidomain conceptualization of cultural processes in research and positive youth adjustment programs are discussed.

Keywords: cultural processes, psychosocial adjustment, Mexican-origin, adolescence, latent profile analysis

Mexican-origin youth, especially girls (Roberts & Chen, 1995), are at a higher risk for internalizing distress relative to adolescents of other ethnic groups (Polo & Lopez, 2009). Further, girls’ well-being seems to be associated with cultural processes more so than that of boys (Berry, Phinney, Sam, & Vedder, 2006). As such, identifying cultural-embedded avenues for supporting the psychosocial adjustment of Mexican-origin girls is important for developing strategies to promote their well-being. Research on cultural processes however, has typically focused on single domains of culture in isolation of one another (e.g., ethnic identity and language use). Taking a holistic approach to cultural experiences that considers how multiple domains coalesce will aid our understanding of the antecedents and outcomes of cultural processes. Acculturation, one cultural process shown to be linked to youth adjustment, involves the adaptation to and adoption of mainstream cultural values and practices while re-
taining or relinquishing one’s heritage culture. Acculturation is a growing area of research with clear implications for psychosocial adjustment among Mexican-origin youth (Lopez-Class, Gonzalez Castro, & Ramirez, 2011), who are part of the largest ethnic group in the United States (U.S. Census Bureau, 2011). Acculturation may work in concert with other cultural processes such as ethnic identity and familial ethnic socialization to impact psychosocial outcomes among Latino youth.

Despite theoretical perspectives that emphasize the multifaceted nature of cultural processes (e.g., Schwartz, Unger, Zamboanga, & Szapocznik, 2010), much of the research in this area has not examined cultural processes jointly. Further, few have taken a person-centered approach to examine profiles that emerge from multiple cultural domains.

In the current study, we took a multidomain approach to cultural processes by examining cultural profiles, conceptualized as involving intrapersonal, interpersonal, and familial domains. We examined the latent profiles that emerged from these domains among Mexican-origin adolescent girls, and examined differences between cultural profiles in perceived discrimination and psychosocial adjustment (i.e., depressive symptoms and self-esteem).

**Cultural Profiles**

Individuals experience culture in diverse ways, within multiple domains. For instance, Mexican-origin youth form personal meaning around their ethnicity and identification with their culture, they engage in cultural activities on a range of levels, and the experience and embeddedness of culture differs across family units. These components are associated, but independent. For instance, one may present great affiliation with her Mexican heritage in terms of identity through personal exploration, but not engage in cultural activities with her family. As such, it is important to examine the intersection of these processes using a person-centered analytic strategy. Our conceptualization of cultural profiles involves (a) an intrapersonal domain that encompasses an internalized sense of cultural meaning through identity and values (e.g., ethnic identity), (b) an interpersonal domain that involves cultural practices (e.g., language use), and (c) a familial domain in which cultural orientation of family members are reciprocally associated such that cultural orientation is constructed and maintained at the family and individual levels (e.g., familial ethnic socialization). Scholars have previously described cultural orientation as involving similar domains. Schwartz et al. (2010) highlighted domains of cultural practices, identifications, and values. Other scholars such as Chun (2006) have argued that the familial context is a domain of cultural orientation such that cultural orientation at the family level is intrinsically associated with that at the individual level. To date, however, no studies have examined the confluence of intrapersonal, interpersonal, and familial domains of cultural experience.

The intrapersonal domain involves an internalized sense of affiliation with one’s ethnic group through exploratory activities (e.g., engaging in cultural activities) and a personal understanding of the meaning of one’s ethnicity. This domain also involves cultural exploration, understanding, pride at an individual level, and social proximity to culture through generational status. As such, this domain is conceptualized as ethnic identity and its components of exploration, resolution, and affirmation (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004) and generational status. Ethnic identity exploration involves seeking out information about one’s ethnic group. Resolution refers to an individual’s understanding of the importance of ethnicity in their identity. Finally, affirmation refers to positive and negative feelings about ethnic group membership. Although typically viewed as a distinct construct from acculturation and cultural orientation more broadly, some scholars have argued that ethnic identity is an internalized affiliation with one’s ethnic or cultural group (e.g., Schwartz et al., 2010). As such, it is beneficial to examine how ethnic identity works in concert with other cultural processes such as acculturation and familial ethnic socialization to predict adolescent adjustment.

The interpersonal domain involves cultural practices or the outward demonstrations of one’s cultural orientation. Language use is commonly used as a proxy for cultural orientation (Zamboanga, Tomaso, Kondo, & Schwartz, 2014), but is limited in the information it provides regarding other aspects of an individual’s cultural orientation, making it important to ex-
amine language use in conjunction with other cultural processes. For instance, adolescents may have an internalized sense of culture (ethnic identity) but not understand Spanish because of a lack of exposure to Spanish-speaking peers and family. Alternatively, an adolescent may engage in many cultural practices including frequent use of Spanish, but feel negatively about being Latino (negative ethnic identity affirmation). Nonetheless, use of the language of one’s heritage culture provides an important interpersonal connection to others within that culture and has been utilized as a proxy for cultural orientation due to its association with engagement in other cultural behaviors.

Finally, cultural processes are intrinsically embedded within family level cultural practices and identity. Much of the existing literature has conceptualized family level cultural processes such as familial ethnic socialization as predictors of individual-level cultural processes (e.g., Schwartz & Zamboanga, 2008). Recently, however, empirical evidence has emerged suggesting that familial ethnic socialization may be a reciprocal process among Latino families such that familial cultural teaching predicts higher levels of adolescent ethnic identity and adolescent ethnic identity elicits more cultural teaching from family (Umaña-Taylor, Zeiders, & Updegraff, 2013). Further, directionality of effects was impacted by generational status such that socialization predicted ethnic identity among immigrant youth, but the reverse was true among U.S.-born youth. As such, cultural processes within the family may be an important component of adolescent cultural profiles, rather than only predictive of them. Familial ethnic socialization may be a bidirectional form of cultural maintenance that evolves as a part of the cultural orientation and ethnic identity formation processes.

Most research examining the associations between these proposed cultural profile domains has taken a variable-driven approach. There is support for associations between intrapersonal and interpersonal (Cuellar, Nyberg, Maldonado, & Roberts, 1997), intrapersonal and familial (Umaña-Taylor et al., 2013), and interpersonal and familial domains (Knight, Bernal, Cota, Garzy, & Ocampo, 1993). Findings have been somewhat mixed, however (Schwartz, Zamboanga, & Jarvis, 2007), suggesting that it is possible for adolescents to feel connected to their ethnic group while not participating in cultural behaviors. In other words, adolescents may have a strong intrapersonal experience of culture but a weaker interpersonal experience of culture. As such, these cultural processes should be examined jointly because they may coalesce to form unique cultural profiles.

Other scholars have taken a person-centered analytic strategy by identifying the cultural orientation types that emerge from a set of constructs. This strategy allows researchers to identify cultural patterns that actually exist among individuals. In one study that employed a person-centered approach among Mexican-origin adolescents, four profiles emerged based on ethnic identity, language use, and a single item indicator of cultural practice preference (Matsumaga, Hecht, Elek, & Ndiaye, 2010). Strong ethnic identification referred to a profile in which adolescents reported high levels of ethnic identity exploration and affirmation and were highly likely to be bicultural (i.e., endorse both U.S. and Mexican cultural practices and speak English and Spanish). A moderate ethnic identification also emerged in which adolescents reported moderate levels of ethnic identity exploration and affirmation and were highly likely to be bicultural. In a third profile, adolescents reported high levels of affirmation, but low levels of exploration. They were highly likely to be bicultural. Finally, some adolescents reported low levels of ethnic identity exploration and affirmation and had a low likelihood of being bicultural (monocultural assimilation). This study provided a person-centered multidomain approach to cultural profiles that included identity and cultural practices; however, it did not examine how family level processes co-occur with individual-level cultural domains.

Berry and colleagues (Berry et al., 2006) took a similar multidomain approach to cultural orientation among ethnically diverse immigrant youth and identified four profiles using a cluster analysis of cultural variables (e.g., acculturation, ethnic identity, national identity, cultural values). The four profiles closely mirrored the theoretical cultural orientations that Berry had previously proposed (Berry, 1997). A cluster emerged that was oriented toward the culture of origin. Another emerged that was oriented toward the receiving culture. An integrated, or bicultural, cluster emerged in which individuals were oriented toward their culture of origin and
the receiving culture. Finally, a diffused cluster emerged in which individuals did not appear to have an organized ethnic identity or cultural orientation. Similarly, Schwartz and Zamboanga (2008) empirically tested Berry’s model using a person-centered approach. Results largely supported the model, but did suggest more variation in bicultural orientations than was evident in Berry’s theory. These studies provide more complete views of cultural profiles by including the domains of cultural identity, practice, values, and context. Further, they indicate that cultural profiles may be more nuanced than suggested by theory. The models, however, are solely focused on individual-level processes and do not acknowledge that cultural processes are formed and maintained within the family context.

Taken together, these theoretical and empirical notions demonstrate the richness that can be achieved through jointly examining multiple domains of cultural processes. In the current study, we employ a person-driven strategy to examine cultural experiences within a larger cultural context by considering cultural profiles in terms of intrapersonal, interpersonal, and familial domains. Further, we move the focus of cultural experience from the individual to a reciprocal process that is embedded within the family system. As such, the first goal of the current study was to identify latent cultural profiles among Mexican-origin adolescent girls through a multidomain person-centered approach.

Outcomes of Cultural Profiles

Research suggests that cultural developmental processes are individually associated with several positive outcomes among ethnic minority youth. In general, orientation toward one’s heritage culture is an asset for psychosocial adjustment. In particular, higher levels of ethnic identity have been linked to higher self-esteem (Bracey, Bámaca, & Umaña-Taylor, 2004) and fewer depressive symptoms (Umaña-Taylor & Updegraff, 2007). Further, behavioral orientation toward heritage culture has been linked to more positive adjustment among Latino youth (Smokowski, Rose, & Bacallao, 2008) and been shown to buffer the association between cultural stressors and adjustment among Latino college students (Alamilla, Kim, & Lam, 2009). In addition, family oriented cultural values such as familism have been linked to higher self-esteem among Latino youth (Smokowski & Bacallao, 2007).

Although existing work indicates the importance of an identification with one’s culture of origin in terms of ethnic identity, cultural orientation, and family centered processes, no studies to date have examined how these cultural factors jointly contribute to the psychosocial outcomes of Latino youth. Understanding the cultural processes implicated in the promotion of positive psychosocial adjustment among Mexican-origin adolescents is vital, particularly for girls (Lorenzo-Blanco, Unger, Ritt-Olson, Soto, & Baezconde-Garbanati, 2011). Girls report lower self-esteem during adolescence and the gender disparity in self-esteem widens throughout adolescence (Kling, Hyde, Showers, & Buswell, 1999). Further, Mexican-origin girls are at a heightened risk of depressive symptomatology (Poló & Lopez, 2009; Roberts & Chen, 1995). Thus, the final goal of the current study was to examine the association between cultural profiles and psychosocial adjustment (i.e., self-esteem and depressive symptoms).

Hypotheses

With the current study, we aimed to examine cultural profiles among Mexican-origin girls using a person-centered method, latent profile analysis, and including intrapersonal, interpersonal, and familial domains. We expected to find profiles that mirrored those identified in previous work such as strong and weak orientations toward Mexican culture and mixed-levels of cultural orientation and identification across domains.

The second goal of our study was to examine the associations between cultural profiles and psychosocial adjustment. Specifically, we examined differences in depressive symptoms and self-esteem between cultural profiles. We expected that a cultural profile in which individuals reported a strong orientation toward Mexican culture across all three domains would report the fewest depressive symptoms and the highest self-esteem. Due to the confounded nature of generational status and socioeconomic status (SES), we controlled for mother’s educational attainment as a proxy for SES. In addition, given the impact of perceived discrimina-
tion on psychosocial adjustment (Schmitt, Branscombe, Postmes, & García, 2014) and the association between perceived discrimination and intrapersonal cultural processes (Umaña-Taylor & Guimond, 2012), we examined differences in reported discrimination between cultural profiles and controlled for its influence on psychosocial adjustment.

Method

Participants

Data for the current study were from Wave 1 of a longitudinal study investigating cultural and developmental processes among Mexican-origin female adolescents (N = 338; Bámaca-Colbert & Gayles, 2010). Wave 1 was used for the current study because some domains of the cultural profiles were not measured at later waves. Using a longitudinal-cohort design to examine developmental processes, the participants were in either seventh or 10th grade at the time of the study and were recruited from four middle and six high schools in a metropolitan area of the Southwest United States. In each school, Latinos accounted for 67% to 88% of the student body. Seventh graders (n = 170) were 12.27 years in age on average (SD = .48), were predominantly U.S.-born (63.6%), and 64.3% lived with both of their biological parents. The 10th graders (n = 168) averaged 15.21 years in age (SD = .46), most were born in the U.S. (60.6%), and 61.3% lived with both of their biological parents. Among Mexican-born participants, age of arrival in the United States ranged from 1 to 14 years (M = 6.39, SD = 3.96). Most adolescents reported speaking Spanish in their home such that 43.9% reported speaking primarily Spanish, 44.5% reported speaking Spanish and English, and 11.6% reported speaking primarily English in their homes.

Procedures

Recruitment letters, distributed by social science and homeroom teachers, were sent to the homes of seventh and 10th grade girls who were identified as Latina by school records. Participation rates varied by school and grade (i.e., 17.1 to 25.9% among seventh graders and 6.1 to 17.9% among 10th graders). Adolescents who returned parent consent and youth assent forms completed a self-administered survey at school during class, lunch, or after school. The surveys took approximately 1 hr to complete. Surveys were available in English and Spanish. All measures used in this study had been translated into Spanish for a previous study on Latino adolescents (see Umaña-Taylor & Updegraff, 2007). Most participants completed the survey in English (80.5%; n = 272) and 19.5% (n = 66) completed the survey in Spanish. Participants were compensated $10 for participation. Research assistants were available to answer questions during data collection.

Measures

Intrapersonal domain. The Ethnic Identity Scale (EIS; Umaña-Taylor et al., 2004) was used to measure ethnic identity. The EIS is composed of three subscales assessing distinct components of ethnic identity: Exploration (seven items; e.g., “I have read books, magazines, newspapers, or other materials that have taught me about my ethnicity”), Resolution (four items; e.g., “I understand how I feel about my ethnicity”), and Affirmation (six items; e.g., “I dislike my ethnicity” [reverse coded]). Participants responded to statements on a 4-point Likert-type scale ranging from 1 (does not describe me at all) to 4 (describes me very well); higher scores indicate higher levels of Exploration (α = .80 and .70 for English and Spanish, respectively), Resolution (α = .83 and .84 for English and Spanish, respectively), and Affirmation (α = .86 and .87 for English and Spanish, respectively). The EIS has demonstrated strong internal consistency in samples of ethnically diverse adolescents (Umaña-Taylor et al., 2004).

Participants’ and their mothers’ places of birth were coded to determine participants’ generational status. Participants who were born outside of the United States were coded as 1 (first generation; n = 115). Those who reported being U.S.-born with foreign-born mothers were coded as 2 (second generation; n = 165). Lastly, participants who were U.S.-born with U.S.-born mothers were coded as 3 (third or greater generation; n = 58).

Interpersonal domain. The Bidimensional Acculturation Scale for Hispanics (Marin & Gamba, 1996) was utilized to assess language
use. Specifically, participants responded to 12 items that focused on perceived English proficiency (e.g., “How well do you write in English?”) and frequency of use (e.g., “How often do you speak in English?”). In addition, participants responded to 12 items that focused on perceived Spanish proficiency (e.g., “How well do you speak Spanish?”) and frequency of use (e.g., “How often do you speak Spanish with your friends?”). Participants responded to items on a 4-point Likert-type scale ranging from 1 (almost never) to 4 (almost always) for language use, and 1 (poorly) to 4 (excellent) for language proficiency. The Bidimensional Acculturation Scale for Hispanics has shown strong reliability among Latino adolescents (Baumann, Kuhlberg, & Zayas, 2010). With the current sample, the alpha coefficients for English use were .85 and .90 for surveys completed in English and Spanish, respectively. Alpha coefficients for Spanish use were .93 and .71 for English and Spanish surveys, respectively.

Familial domain. The degree to which families socialize their children with respect to their ethnicity was measured using the Familial Ethnic Socialization Measure (FESM; Umaña-Taylor & Fine, 2004). FESM assesses overt familial ethnic socialization (five items; e.g., “My family teaches me about our family’s ethnic/cultural background”) and covert familial ethnic socialization (seven items; e.g., “Our home is decorated with things that reflect my ethnic/cultural background”). Participants were asked to respond on a 5-point Likert-type scale ranging from 1 (not at all true) to 5 (very much true). This measure has shown strong reliability among ethnically diverse samples of adolescents (Umaña-Taylor & Fine, 2004). The FESM demonstrated good reliability in the current sample (α = .92 and .91 for English and Spanish, respectively).

Psychosocial adjustment. The Rosenberg Self-Esteem Scale (Rosenberg, 1979) was used to measure self-esteem. The 10-item measure assessed adolescents’ positive and negative feelings about themselves (e.g., “I feel that I have a number of good qualities” and “I feel that I do not have much to be proud of”) on a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Negatively worded items were reverse scored so that higher values indicated higher self-esteem. The Rosenberg Self-Esteem Scale has demonstrated good internal consistency among samples of Latino adolescents (Kuhlberg, Peña, & Zayas, 2010). The alpha coefficients obtained for the current sample were .75 and .84 for English and Spanish, respectively.

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was used to measure participants’ depressive symptoms. Participants responded to 20 items, on a 4-point scale ranging from 0 (rarely or none of the time) to 3 (most or all of the time), about how often they had experienced a given symptom within the last week. Positively worded items were reversed coded before summing across items to create a final depressive symptomology score, where higher scores reflected more reports of depressive symptoms (α = .90 for English and Spanish). The Center for Epidemiological Studies Depression Scale has demonstrated strong internal consistency in samples of Latino youth (Lorenzo-Blanco et al., 2011).

Perceived discrimination. The Perceived Discrimination Scale (Whitbeck, Hoyt, McMorris, Chen, & Stubben, 2001) was adapted for use with Latinos to measure participants’ perceived discrimination (Umaña-Taylor & Updegraff, 2007). The 10-item scale assesses three domains: Global, Authority, and School. Global Discrimination (five items) assesses a range of general experiences of discrimination (e.g., “How often has someone yelled a racial slur or insult at you?”). Authority Discrimination (three items) assesses discrimination experienced from authority figures, involving mistreatment by a store owner/clerk/employee, distrust from adults for doing something wrong, and being harassed by police officers. School Discrimination (two items) assesses experienced discrimination at school (e.g., “How often have you encountered teachers who didn’t expect you to do well because of your race?”). This study aggregated responses across items to create a mean perceived discrimination score. This measure has demonstrated good reliability among other Latino adolescent samples (Umaña-Taylor & Updegraff, 2007) and in the current sample (α = .86 and .85, for English and Spanish, respectively).

Socioeconomic status. The mother’s level of education was used as a proxy for SES and included as a control variable in all analyses. The mother’s level of education was coded as
1 = no school to sixth grade (23.7%), 2 = seventh/eighth to high school, but no diploma (40.2%), 3 = high school graduate or equivalent (17.5%), and 4 = some college and beyond (13.0%). Education information was not available for the remaining 5.6% of mothers.

Analytic Strategy

Latent profile analysis (LPA) was used to identify the latent cultural profiles. LPA is a person-centered analytic strategy that identifies categorical profiles based on a set of continuous indicators that emerge from the data (Muthén & Muthén, 2000). A series of five-indicator LPA models were estimated using MPlus Version 6.12 (Muthén & Muthén, 1998–2011) with ethnic identity (i.e., exploration, resolution, and affirmation), English language use, Spanish language use, familial ethnic socialization (FES) and generational status as indicators. To identify latent profiles that accounted for correlations between indicators, the local independence assumption (Muthén, 2001) was upheld by constraining correlations between indicators to zero within each profile, which is the default in MPlus Version 6.12 (Muthén & Muthén, 1998–2011). To determine profile enumeration subsequent models included an additional profile and were compared to a model with k − 1 profiles using the Vuong–Lo–Mendell–Rubin likelihood ratio test (VLMR), Akaike information criterion (AIC), Baysian information criterion (BIC), adjusted Baysian information criteri- (aBIC), and entropy. We continued to analyze models with k + 1 profiles until the VLMR was nonsignificant (VLMR > .05; Lo, Mendell, & Rubin, 2001); minimum values were reached for AIC, BIC, and aBIC (Kline, 2010); and entropy was > .80 (Pastor, Barron, Miller, & Davis, 2007) indicating that the inclusion of an additional profile did not improve model fit or profile stability and the model with k − 1 profiles should be retained. Missing data were accounted for using full information maximum likelihood estimation.

To test our second hypothesis a class analysis strategy was used to examine the association between cultural profiles and depressive symptoms and self-esteem, respectively. Class analysis strategy is the method of assigning cases to their most likely categorical profiles based on probability estimates in the LPA model (Muthén & Muthén, 2000). These categorical variables can then be included in other statistical analyses to examine their associations with other variables. A class analysis strategy is appropriate when entropy, a measure of the stability of the LPA model, is > .80 (Muthén & Muthén, 2000). Participants were categorized into their most probable profile, as identified by the final LPA model. Analysis of covariance models were used to examine whether profiles differed in depressive symptoms and self-esteem, controlling for mother’s education and perceived discrimination. We examined all possible pairwise post hoc comparisons. Bonferroni adjustments were made in each model to account for Type I error inflation due to the number of comparisons.

Results

Preliminary analyses were performed to examine the distribution of and bivariate associations between study variables. All variables were adequately normally distributed, such that they had a skew of less than |2| and a kurtosis of less than |7| (West, Finch, & Curran, 1995). On average adolescents reported depressive symptoms at .85 (SD = .57; range: 0, 2.90) and self-esteem at 3.03 (SD = .49; range: 1.30, 4.00). English and Spanish language use were negatively correlated at the bivariate level. English use was positively correlated with ethnic identity exploration and resolution, whereas Spanish language use was positively correlated with ethnic identity affirmation. Ethnic identity exploration and resolution were positively correlated with one another, but neither was significantly associated with affirmation. FES was positively associated with English use and ethnic identity exploration and resolution, but negatively correlated with ethnic identity affirmation. Discrimination was negatively correlated with affirmation and self-esteem, and positively correlated with depressive symptoms. All three ethnic identity components and FES were positively associated with self-esteem; however, only ethnic identity affirmation was significantly (and negatively) correlated with depressive symptoms (see Table 1).

One-way analysis of variance was used to examine mean differences in study variables between seventh and 10th graders and between participants who completed the survey
in English and those who completed it in Spanish. Compared to seventh grade girls, girls in 10th grade reported more frequent and proficient Spanish use, $F(1, 336) = 11.63, p < .01$, higher self-esteem, $F(1, 336) = 17.47, p < .001$ and ethnic identity affirmation, $F(1, 336) = 6.84, p < .01$, and exploration, $F(1, 336) = 7.35, p < .01$. These differences are consistent with trajectories of ethnic identity and adjustment during adolescence (Umaña-Taylor, Gonzales-Backen, & Guimond, 2009). Therefore, we examined differences in cultural profiles by age cohort. As expected, girls who completed the survey in Spanish reported more frequent and proficient Spanish use, $F(1, 336) = 116.27, p < .001$, and less frequent and proficient English use, $F(1, 336) = 190.46, p < .001$, compared to girls who completed the survey in English. Girls who completed the survey in Spanish also reported lower ethnic identity affirmation, $F(1, 336) = 7.04, p < .01$, and higher familial ethnic socialization, $F(1, 336) = 4.57, p = .05$, compared to those who completed it in English. There were no differences between age cohorts or language of survey in discrimination or psychosocial adjustment.

### Cultural Profiles

A four-profile solution emerged as the best fit for the data, based on a flattening of the AIC, BIC, and aBIC for subsequent ($k + 1$) solutions. Further, the VLMR was significant for the four-profile solution, suggesting a better fit compared to a three-profile solution, but the VLMR was nonsignificant for a five-profile solution, indicating that this model did not improve fit over that of the four-profile solution. The quality of classification of cases into the identified profiles was good, indicated by entropy of .83 (see Table 2). We analyzed a multiple group LPA model to examine possible cohort differences between seventh and 10th graders. The multiple group model did not improve model fit. As such, the single-group, four-profile solution was retained. Cultural profiles were interpreted by comparing the estimated within profile means to the grand means of each indicator, using theory and research as a framework (see Table 3 and Figure 1). The most common profile (41.1%) to emerge reported above average levels on mul-

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**Table 1**

| Correlations of Study Variables (Sample Size in Parentheses) |
|------------------|------------------|------------------|------------------|------------------|
| 2               | .19*** (319) | .28*** (338) | -.22*** (338) | .00 (319) |
| 3               | .22*** (338) | .00 (319) | .00 (319) | .00 (319) |
| 4               | -.22*** (338) | .00 (319) | .00 (319) | .00 (319) |
| 5               | -.06 (338) | -.09 (338) | -.11 (338) | -.06 (338) |
| 6               | .05 (338) | .07 (338) | .07 (338) | .05 (338) |
| 7               | -.06 (338) | -.09 (338) | -.11 (338) | -.06 (338) |
| 8               | -.02 (319) | -.04 (319) | -.04 (319) | -.02 (319) |
| 9               | .02 (319) | .05 (338) | .05 (338) | .02 (319) |
| 10              | -.07 (338) | -.10 (338) | -.10 (338) | -.07 (338) |

Note. EI = ethnic identity; FES = familial ethnic socialization. *p < .05, **p < .01, ***p < .001.
tiple cultural factors therefore we called this profile strong-positive. Individuals in the strong-positive profile reported levels of ethnic identity exploration, resolution, and affirmation that were above the grand mean. Similarly, strong-positive adolescents reported English and Spanish language use that were slightly above the mean and FES that was above the mean. These adolescents were more likely to be second generation, rather than earlier or later generations. The second most common profile (32.8%), labeled Spanish-dominant low, was characterized by levels of ethnic identity exploration and resolution, English language use, and FES that were below the mean. Spanish-dominant low adolescents reported above-mean Spanish language use, and ethnic identity affirmation that was slightly higher than the mean. Further, individuals in this profile were likely to be first or second generation rather than third generation. We identified a profile that was similar to the Spanish-dominant low profile in that it was characterized by lower ethnic identity exploration and resolution, and FES and ethnic identity affirmation that were slightly above the mean. Contrary to the Spanish-dominant-low profile, however, individuals in this profile reported the lowest Spanish language use and English use that was above the mean. Thus, we called this profile English-dominant low. The English-dominant low profile (17.5%) was most likely to be second or third generation. Finally, the fourth profile, labeled strong-negative (8.6%), was characterized by high scores on ethnic identity exploration, the highest levels of resolution, but the lowest levels of affirmation (1 standard deviation below the grand mean). Individuals in the strong-negative group appeared to be bilingual in that they reported use of English and Spanish.

### Table 2
Model Fit Statistics for Latent Profile Solutions for the Total Sample

<table>
<thead>
<tr>
<th>Number of profiles</th>
<th>Number of free parameters</th>
<th>AIC</th>
<th>BIC</th>
<th>aBIC</th>
<th>VLMR p value</th>
<th>Entropy</th>
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<tr>
<td>1</td>
<td>14</td>
<td>5,003.41</td>
<td>5,056.93</td>
<td>5,012.52</td>
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<td>—</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
<td>4,739.89</td>
<td>4,827.82</td>
<td>4,754.86</td>
<td>&lt;.001</td>
<td>.73</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>4,528.77</td>
<td>4,661.11</td>
<td>4,559.60</td>
<td>.052</td>
<td>.83</td>
</tr>
<tr>
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<td>41</td>
<td>4,433.18</td>
<td>4,589.92</td>
<td>4,450.85</td>
<td>.004</td>
<td>.83</td>
</tr>
<tr>
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<td>50</td>
<td>4,377.78</td>
<td>4,568.93</td>
<td>4,410.32</td>
<td>.711</td>
<td>.83</td>
</tr>
</tbody>
</table>

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = adjusted BIC; VLMR = Vuong–Lo–Mendell–Rubin likelihood ratio test. Fit statistics for the best fitting model are in bold.

### Table 3
Descriptive Statistics of Latent Profile Continuous Indicators by Cultural Profile

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>Strong-positive</th>
<th>Strong-negative</th>
<th>Spanish-dominant low</th>
<th>English-dominant low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
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<tr>
<td>English language use</td>
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<td>3.29</td>
<td>.69</td>
</tr>
<tr>
<td>Spanish language use</td>
<td>3.15</td>
<td>.55</td>
<td>3.17</td>
<td>.68</td>
</tr>
<tr>
<td>EI exploration</td>
<td>3.20</td>
<td>.45</td>
<td>3.08</td>
<td>.45</td>
</tr>
<tr>
<td>EI resolution</td>
<td>3.55</td>
<td>.43</td>
<td>3.43</td>
<td>.58</td>
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<tr>
<td>EI affirmation</td>
<td>3.79</td>
<td>.31</td>
<td>1.66</td>
<td>.44</td>
</tr>
<tr>
<td>FES</td>
<td>4.09</td>
<td>.59</td>
<td>4.25</td>
<td>.63</td>
</tr>
<tr>
<td>Generation</td>
<td>2nd</td>
<td>1st</td>
<td>1st or 2nd</td>
<td>2nd or 3rd</td>
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</table>

Note. EI = ethnic identity; FES = familial ethnic socialization.
that were above the mean. They also reported the highest levels of FES (>2 standard deviations above the grand mean). Individuals with a strong-negative cultural profile were most likely to be first generation immigrants.

Cultural Profiles and Psychosocial Adjustment

Because the LPA model demonstrated good stability with entropy of .83, we proceeded with a class analysis strategy. Given that perceived discrimination may be directly associated with cultural profiles, we first examined mean differences in perceived discrimination between profiles. Cultural profiles did not differ in reported discrimination, $F(3, 334) = 1.29, p < .28$. As such, we proceeded to examine profile differences in depressive symptoms and self-esteem, controlling for perceived discrimination, given its possible association with psychosocial adjustment. Results for the depressive symptoms model showed that depressive symptoms were not related to mother educational attainment, but were significantly positively associated with perceived discrimination. Results did not support our hypothesis and indicated that cultural profiles did not differ significantly in reported depressive symptoms. For self-esteem, analysis of covariance results suggested that mother educational attainment was not associated with self-esteem, but that perceived discrimination was negatively related to self-esteem. Our hypothesis was supported for self-esteem in that the model revealed significant differences in self-esteem between cultural profiles (see Table 4).

Post hoc comparisons revealed that girls with a strong-positive cultural profile had the highest levels of self-esteem ($M_{self-esteem} = 3.18$), compared to Spanish-dominant low ($M_{self-esteem} = 2.96$), English-dominant low ($M_{self-esteem} = 2.87$), and strong-negative ($M_{self-esteem} = 2.87$) cultural profiles. There were no other significant differences in self-esteem between cultural profiles.

Discussion

Scholars have proposed a multidomain approach to cultural orientation that includes domains such as behavior, values, identity, and context of receiving and heritage cultures (Schwartz et al., 2010). Similarly, scholars have highlighted the importance of examining ethnic identity as a multidimensional construct consisting of exploration, resolution, and affirmation (Umana-Taylor et al., 2004) and examining how it is embedded with other cultural processes (Schwartz et al., 2010). Further, theoretical notions have been proposed that cultural processes occur and are maintained at the individual and family levels. The current study proposes a model of cultural profiles that includes intrapersonal, interpersonal, and familial do-

![Figure 1](image-url). Standardized estimated means of latent profile continuous indicators by cultural profile. EI = ethnic identity; FES = familial ethnic socialization.
mains and provides an important step forward in research on cultural processes. Specifically, this study moves the field forward by (a) taking a person-centered approach to examining cultural profiles, (b) taking a holistic approach to cultural profiles that includes multiple domains, and (c) moving cultural research from a focus on the self to a focus on the self in the family. Further, the current findings highlight the importance of having a strong and positive cultural profile across domains, given that the strong-positive cultural profile reported the highest levels of self-esteem compared to the other three profiles.

The current study extends the existing literature by examining the intersection of multiple cultural processes, using a person-centered analytic strategy, LPA. LPA is a particularly appropriate analytic method to address the intersection of cultural processes because it allows us to identify subgroups of individuals based on multiple cultural factors whereas traditional analytic models such as multiple regression and structural equation modeling identify variable-centered patterns of associations among cultural processes (Pastor et al., 2007). The use of multiple cultural factors reveals important nuances in the structure of cultural experiences and their association with psychosocial adjustment. For instance, if the cultural indicators were examined in isolation of one another, we might expect that those with the highest ethnic identity exploration and resolution to have higher self-esteem, however, our findings indicate that the individuals who were most strongly Mexican oriented also reported the lowest affirmation and thereby had lower self-esteem compared to those with a strong-positive cultural profile. As such, scholars should continue to consider the joint impact of multiple cultural factors on the psychosocial adjustment of adolescents. Further, in developing programs to promote positive adolescent adjustment among Mexican-origin girls, this work demonstrates the importance of promoting ethnic and cultural pride in addition to encouraging ethnic identity development and cultural practices.

The cultural profiles identified in this study were unique from one another in expression of cultural processes in intrapersonal, interpersonal, and familial domains and highlight the need to take a multidomain approach to cultural experiences. In particular, the Spanish-dominant low and English-dominant low cultural profiles were similar in terms of their ethnic identity and FES, but differed in their language use and proficiency and generational status such that the Spanish-dominant group was more likely to be of an earlier generation than the English-dominant low group. This finding high-
lights the limitations of language use as a proxy for cultural orientation. If this strategy were used in the current study, individuals in the Spanish-dominant profile would have been viewed as having a strong Mexican cultural orientation, however, by also examining their cultural identity and familial context, we find that they are fairly low on identification with Mexican culture in other cultural domains. Similarly, we cannot assume that a strong Mexican orientation would suggest positive affirmation for one’s ethnic group membership, given that individuals in the strong-negative profile reported markedly low ethnic identity affirmation. This demonstrates that researchers should continue to employ a multidomain approach to cultural processes.

The findings of this study partially support previous findings from work on cultural profiles and extend the literature by adding a more nuanced multidomain approach. The profiles identified in the current study replicate three of the four profiles identified by Matsunaga et al. (2010). In particular, we found evidence for moderately and strongly heritage-culture oriented profiles. Further, the two low cultural profiles in the current study (English and Spanish dominant) were similar to the monocultural assimilation profile identified in the Matsunaga et al. study. The current study extends the findings of this research by examining how the intrapersonal and interpersonal domains are integrated with familial-level cultural processes. Indeed, cultural processes and experiences do not occur in a vacuum, but rather are embedded within the family system.

Our findings contrast with profiles identified by Salas-Wright and colleagues (Salas-Wright, Clark, Vaughn, & Córdova, 2015) among Hispanic adults. Specifically, their study identified cultural profiles that were differentiated by language use and proficiency and cultural behaviors and values. Overall the profiles in this study were consistent across language use and cultural values (e.g., individuals who were Spanish dominant were also likely to adhere to Hispanic cultural values and English dominant were more focused on U.S. cultural values). In our study, however, we identified profiles in which language use was in contrast to identity and familial context (e.g., Spanish-dominant low). It is possible that this difference is due to adolescent development and these individuals are approaching a period of ethnic identity formation. As such, they may become more oriented to Mexican culture as they age and their ethnic identity forms.

A second goal of the current study was to examine how cultural profiles were associated with psychosocial adjustment. Our hypothesis that adolescents with higher levels of cultural factors across domains would report fewer depressive symptoms and higher self-esteem was partially supported. Specifically, girls in the strong-positive cultural profile reported higher self-esteem compared to girls in the other three profiles. This finding is in line with previous empirical work that demonstrated links between high levels of individual cultural domains and positive youth adjustment (Smith & Silva, 2011) and extends this work by demonstrating that strong and positive cultural orientation across domains is most adaptive for Mexican origin girls.

It is important to note that we did not find an association between cultural profiles and depressive symptoms among the current sample. It seems that a strong and positive cultural profile may encourage positive psychosocial adjustment, but may not decrease the incidence of negative psychosocial adjustment or mental health outcomes. Previous research has found differential associations between predictors and positive versus negative psychosocial adjustment among Latino adolescents (Supple & Plunkett, 2011). Further, discrimination predicted depressive symptoms, suggesting that cultural stressors, rather than cultural strengths may be more important in predicting negative psychosocial adjustment.

Although we did not focus on perceived ethnic discrimination, it was included as a control variable due to its possible association with cultural processes and adjustment. Our findings give additional support to existing work that indicates discrimination as a risk factor for poor psychosocial adjustment among adolescents (Zeiders, Umana-Taylor, & Derlan, 2013). We did consider whether cultural profiles moderated the association between discrimination and adjustment, but the findings were nonsignificant. In addition, omission of discrimination as a covariate did not result in additional significant findings, and cultural profiles did not significantly differ in reported discrimination. Future studies should continue to examine...
possible protective factors against discrimination and the association between cultural profiles and discrimination.

Although this study extends the literature on cultural processes in important ways, our findings should be interpreted in light of some limitations. First, other than English language use and generational status, we were unable to include measures of U.S. orientation (e.g., identity, family socialization). Thus, we were unable to examine the orientation toward U.S. culture of each profile. Indeed, a strong Mexican orientation does not imply a weak U.S. orientation. Future studies should include indicators of both receiving and heritage cultures in terms of intrapersonal, interpersonal, and familial cultural processes. Second, although data for this study are from a longitudinal study, this study is cross-sectional because some domains of the cultural profiles were not measured at later waves. As such, we cannot speculate about the direction of effects for the association between cultural profiles and psychosocial adjustment and could not examine trajectories of cultural profiles. It may be the case that adolescents with higher self-esteem have stronger psychological resources that would enable them to more fully explore Mexican culture such that they feel more connected their heritage culture. In addition, due to developmental progressions (e.g., ethnic identity; Gonzales-Backen, Bámaca-Colbert, & Allen, 2016) and continued exposure to mainstream U.S. culture, adolescents’ cultural profiles may shift over time. Future studies should employ a longitudinal design to confirm the direction of effects between cultural profiles and psychosocial adjustment and to examine the developmental trajectories of cultural profiles. Finally, we are limited in our generalizability of findings. Although the current study identified cultural profiles and their association with psychosocial adjustment among a specific group of individuals (i.e., Mexican origin adolescent girls), additional work is needed to see if these profiles and associations are replicated among boys and adolescents of other ethnic groups. Although we cannot generalize to other groups, this study does provide important information regarding the within group diversity in cultural experiences that exists among Mexican-origin adolescent girls.

The current study contributes to literature by identifying cultural profiles from intrapersonal, interpersonal, and familial domains using a person-centered analysis strategy. We also identified optimal profiles by examining how cultural processes are jointly associated with psychosocial adjustment. Our multidomain approach highlights the nuances of cultural experiences and emphasizes that the use of single domain proxies such as language use provides a limited representation of cultural processes. Our conceptualization of cultural profiles provides important information that may inform programs to encourage positive psychosocial adjustment among Mexican-origin girls. Mexican-origin girls are at heightened risk for poor psychosocial adjustment compared to Mexican-origin boys and youth of other ethnicities. Given the importance of cultural processes for adolescent girls (Berry et al., 2006), programs utilizing our model, which considers developmentally and culturally relevant individual-level and family embedded factors may prove particularly effective.

Abstract

Gran parte de las investigaciones sobre procesos culturales han utilizado medidas y enfoques unidimensionales para la orientación cultural, aculturación, e identidad étnica. El presente estudio examinó perfiles culturales que surgieron a partir de las dimensiones intrapersonal (i.e., identidad étnica y estatus generacional en los Estados Unidos [EE.UU.]), interpersonal (i.e., uso del idioma), y familiar (i.e., socialización étnica familiar) con 338 niñas de origen mexicano en los grados 7° (n = 170; M edad = 12.27, SD = .28; 63.6% nacidas en EE.UU.) y 10° (n = 168; M edad = 15.21, SD = .46; 60.6% nacidas en EE.UU.). Además, examinamos cómo estos perfiles estaban asociados con autoestima, síntomas depresivos, y discriminación. Cuatro perfiles culturales surgieron usando Latent Profile Analysis (i.e., fuerte-positivo, fuerte-negativo, bajo, con preferencia al español, bajo, con preferencia al inglés). Los resultados indicaron que el perfil muy positivo (i.e., alta identidad étnica y socialización étnica familiar, bilingüe, y segunda generación) fue el mejor adaptado ya que este grupo tuvo el nivel más alto de autoestima. No hubo diferencia entre los perfiles en discriminación y síntomas depresivos. Los resultados resaltan el origen multifacético de los perfiles culturales y sugieren que la afiliación hacia el patrimonio cultural de origen familiar sobre las áreas intrapersonales, interpersonales, y familiares es beneficiosa para adaptación psicológica de la niñas de origen mexicano. Se discutirán las implicaciones que tiene...
el uso de una concepción multifacética de perfiles culturales en la investigación y programas para la adaptación positiva de jóvenes.

References


West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal vari-


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