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Longitudinal trajectories of bicultural identity integration in recently immigrated Hispanic adolescents: Links with mental health and family functioning

Seth J. Schwartz[1], **Jennifer B. Unger**[2], **Lourdes Baezconde-Garbanati**[2], **Verónica Benet-Martínez**[3], **Alan Meca**[1], **Byron L. Zamboanga**[4], **Elma I. Lorenzo-Blanco**[5], **Sabrina E. Des Rosiers**[6], **Assaf Oshri**[7], **Raha F. Sabet**[1], **Daniel W. Soto**[2], **Monica Pattarroyo**[2], **Shi Huang**[1], **Juan A. Villamar**[8], **Karina M. Lizzi**[1], **José Szapocznik**[1]

[1]Department of Public Health Sciences, University of Miami, Miami, FL, USA

[2]Department of Preventive Medicine, University of Southern California, Los Angeles, CA, USA

[3]Department of Political and Social Sciences, Institució Catalana de Recerca i Estudis Avançats at Universitat Pompeu Fabra, Barcelona, Spain

[4]Department of Psychology, Smith College, Northampton, MA, USA

[5]Department of Psychology, University of South Carolina, Columbia, SC, USA

[6]Department of Psychology, Barry University, Miami Shores, FL, USA

[7]Department of Human Development and Family Sciences, University of Georgia, Athens, GA, USA

[8]Department of Psychiatry and Behavioral Sciences, Northwestern University, Chicago, IL, USA

Abstract

This study examined, in a sample of recently immigrated Hispanic adolescents in Miami and Los Angeles, the extent to which bicultural identity integration (BII; involving the ability to synthesise one's heritage and receiving cultural streams and to identify as a member of both cultures) is best understood as a developmental construct that changes over time or as an individual-difference construct that is largely stable over time. We were also interested in the extent to which these trajectories predicted mental health and family functioning. Recent-immigrant 9th graders (N = 302) were assessed 6 times from 9th to 12th grade. Latent class growth analyses using the first 5 timepoints identified 2 trajectory classes—one with lower BII scores over time and another with higher BII scores over time. Higher heritage and US identity at baseline predicted membership in the higher BII class. At the 6th study timepoint, lower BII adolescents reported significantly poorer self-esteem, optimism, prosocial behaviour and family relationships compared with their higher BII counterparts. These findings are discussed in terms of further research on the over-time trajectory of biculturalism, and on the need to develop interventions to promote BII as a way of facilitating well-being and positive family functioning.

Correspondence should be addressed to Seth J. Schwartz, Department of Public Health Sciences, University of Miami, Miami, FL, USA. (SSchwartz@med.miami.edu).

Keywords

Biculturalism; Acculturation; Hispanic; Identity; Mental health; Family functioning

Immigration to the United States (US) is at an all-time high, with nearly 7 million newcomers arriving between 2005 and 2010 (Walters & Trevelyan, 2011). Most of these immigrants have arrived from Latin America, Asia and the Caribbean—regions where collectivism (i.e. emphasis on relational interdependence, such as family and other social ties) tends to be emphasised over individualism (high priority on one's own goals, needs and desires; Triandis, 1995). In contrast to the values of these immigrant populations, the US is one of the most individualist societies in the world (Hofstede, 2001). The chasm between traditional and US cultures causes challenges in balancing the competing, and sometimes incompatible, expectations and demands of these two cultures (Benet-Martínez & Haritatos, 2005). The ways in which migrants manage these diverging cultural demands and integrate them into their overall cultural identity—as well as the antecedents and consequences that these experiences have for immigrants' psychological and socio-cultural adaptation—provide psychologists with a window through which to study acculturation processes. This may be especially true for immigrant adolescents, who encounter normative identity issues in addition to cultural identity issues resulting from immigration. This study examined the extent to which bicultural identity integration (BII)—an identity-based construct involving the ability to synthesise one's heritage and receiving cultures and to identify as a member of both cultures—is a developmental as well as individual-difference construct for recently immigrated Hispanic adolescents in the US. We also examined whether trajectories of BII predict indices of mental health and family functioning.

IDENTITY DEVELOPMENT IN IMMIGRANT AND MINORITY YOUTH

Developing a coherent and integrated identity is a key developmental task of adolescence (Erikson, 1950). Adolescents face the task of deciding who they are and want to be in a number of areas, including career, relationships, values and sexuality. Identity development offers goals and direction through commitments and chosen values: individuals with a coherent sense of identity have higher levels of self-esteem, are less likely to report internalising symptoms, and are at lower risk for problem behaviours (Schwartz et al., 2011). For adolescents from immigrant and minority groups, however, the task of developing a sense of identity is more complex than it is for individuals from the dominant ethnic group (Syed & Mitchell, 2013). Immigrant adolescents must also come to terms with what their ethnic or racial group means to them, as well as how to balance their subgroup membership with their membership in the larger nation or region in which they reside. Thus, as part of developing their personal identity, immigrant and minority youth are faced with the challenge of developing a cultural identity in relation to two often different cultures. Further, identity is a *developmental* process that involves change over time and should be studied longitudinally (Erikson, 1950; Schwartz, 2005).

Cultural identity

During and after international migration, cultural identity can change as immigrants adapt to their new environment while selectively retaining some or all aspects of their cultural heritage (Phinney & Ong, 2007; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Cultural identity refers to change that can occur as part of the process of acculturation and is best represented in terms of heritage and receiving cultural dimensions. This bidimensional perspective may apply particularly well to recent-immigrant adolescents, who likely remember their countries of origin but are still young enough to acquire a second (receiving) cultural stream.

The ability to draw upon the most "appropriate" cultural repertoire (e.g. language, values, symbols and roles) in any given situation—as well as to creatively combine ingredients across cultural streams to accomplish a specific task (e.g. individualistically coming up with ideas but working collectively to implement them)—is advantageous for individuals who are attempting to balance these two cultural streams. However, adolescents who endorse both heritage and US cultures are not necessarily able to integrate these two cultural streams into their sense of self. Research suggests individual differences in immigrants' ability to master multiple cultural backgrounds and to create an individualised cultural repertoire (Benet-Martínez & Haritatos, 2005). These individual differences may be part of a broader ability to create a repertoire that integrates heritage and receiving cultural elements —possibly moving beyond ambivalence to create an integrated algorithm of "who I am" and "how I behave."

Bicultural identity integration

The construct of BII (Benet-Martínez & Haritatos, 2005) extends the construct of biculturalism by incorporating identity theory. BII refers to individual differences in the ability to connect two cultural identities successfully. Within the context of international migration, BII refers to integrating one's heritage and national identities and viewing these two identity components as compatible with one another (Benet-Martínez & Haritatos, 2005). This definition is consistent with Erikson's (1950) concept of identity integration, which he posited as necessary for adaptive functioning.

BII refers to the difference between bridging, and feeling caught between, two cultures. High-BII individuals view their two cultures as compatible parts of their overall cultural identity and are able to switch from one set of cultural schemata to another in response to the cultural demands of a situation (also known as cultural frame switching; Benet-Martínez, Leu, Lee, & Morris, 2002). In contrast, low-BII individuals are less adept at cultural frame switching and often view their heritage and US cultural streams as incompatible and thus keep them separate. Put differently, differences in BII are behaviourally and psychologically consequential. Relative to individuals with low BII, high BII is associated with more favourable psychological and behavioural adjustment (Chen, Benet-Martínez, & Bond, 2008), even after controlling for personality variables such as neuroticism and self-efficacy. It might also be hypothesised that individuals high in BII perceive more favourable family functioning because they are able to integrate their families' cultural heritage with the receiving society's culture (Smokowski & Bacallao, 2011). Indeed, a primary reason

why biculturalism is important for many immigrant groups is because one often must maintain relationships with traditionally oriented family members while also engaging with the receiving culture.

THE PRESENT STUDY

In this study, we examined the longitudinal course of BII among recently immigrated Hispanic adolescents. Although BII is grounded in identity development, whether BII is best understood as a developmental construct that changes over time or as an individual-difference construct that is largely stable over time is unknown. Are there some adolescents who increase in BII and others who decrease? Answering this fundamental question regarding BII will further our understanding of how bicultural identity operates as immigrants spend increasing amounts of time in the society of settlement.

Hypotheses

First, after establishing longitudinal measurement invarince, an important assumption of developmental research (Little, 2013), we used latent class growth analysis to identify heterogeneous classes of adolescents based on their BII intercepts (starting points) and linear slopes (change trajectories). We allowed heritage and US cultural identifications at baseline to predict the growth trajectories of BII as a means of improving the reliability and accuracy of the class solution. Given the lack of longitudinal research on BII, we advanced only tentative hypotheses regarding the classes that would emerge. Based on prior work (e.g. Chen et al., 2008) comparing participants scoring higher versus lower on BII, we expected to find two classes—one representing lower BII and another representing higher BII. We did not have an empirical basis to predict how individuals in these classes might change (or not) over time.

Second, we allowed these growth trajectories to predict indices of psychosocial functioning. Specifically, and drawing on previous research (Benet-Martínez & Haritatos, 2005; Chen et al., 2008), we sought to determine whether BII classes could predict indicators of positive youth development (i.e. self-esteem, optimism and prosocial behaviour). We hypothesised that the higher BII group would rate themselves more favourably on positive youth development. As previously noted, individuals high in BII are able to switch appropriately from one set of cultural schemata to another in response to the demands of the situation (Benet-Martínez et al., 2002). As a result, individuals high in BII may be able to display behaviours consistent with the family's culture of origin and thereby maintain harmonious relationships with traditionally oriented family members while also successfully transacting with friends, teachers and other individuals within the society of settlement. Family functioning might therefore be more favourable in high-BII adolescents than in lower BII-adolescents. Baseline values of the outcome variables were controlled so that directional inferences could be drawn (Little, 2013).

METHOD

Participants

We recruited a sample of recently immigrated adolescents because they likely maintain close contact with both their cultural heritage and with US culture. Given Cheung, Chudek, and Heine's (2011) finding that individuals who immigrated prior to early or middle adolescence were most able to integrate a second culture into their sense of self, we sampled adolescents in the ninth grade. Being able to integrate these two cultures into a multicultural repertoire (i.e. BII) is especially important for this group, given the fact that identity issues generally begin to be addressed during early and middle adolescence. Such an assertion might be made more broadly with regard to individuals from immigrant families, although recently immigrated adolescents may be an exemplar group in which to examine trajectories of BII (i.e. because they have direct experience with both cultural contexts and are still young enough to fluidly incorporate a second culture into their sense of self; Cheung et al., 2011). We sampled from two large and heavily Hispanic US cities, Miami and Los Angeles, as a way of capturing more diversity in the Hispanic immigrant population than would have been possible in either of these cities alone.

The sample consisted of 302 recent-immigrant Hispanic adolescents (53% boys; mean age 14.51 years at baseline; $SD = 0.88$ years, range 14–17). As per inclusion criteria, all adolescents had arrived in the US within 5 years of the baseline data collection and were either finishing or entering the ninth grade. At baseline, adolescents in Miami ($n = 152$) had been in the US for a median of 1 year (interquartile range = 0–3 years), whereas adolescents in Los Angeles ($n = 150$) had been in the US for a median of 3 years (interquartile range = 1–4 years). Adolescents' ages at immigration ranged from 9 to 17 ($M = 12.63$, $SD = 1.82$).

The Miami sample was primarily from Cuba (61%), the Dominican Republic (8%), Nicaragua (7%), Honduras (6%), Colombia (6%) and other Hispanic countries (12%); the Los Angeles sample was primarily from Mexico (70%), El Salvador (9%), Guatemala (6%) and other Hispanic countries (15%). The mean annual household income, as reported by parents, was $30,854 ($SD = $10,824). Additional sample information and differences between sites are reported in Schwartz et al. (2014).

Procedures

Baseline data were gathered during the summer of 2010, and subsequent timepoints occurred during Spring 2011, Fall 2011, Spring 2012, Fall 2012 and Spring 2013. Participants were recruited from randomly selected public high schools in heavily Hispanic areas in Miami-Dade ($k = 10$) and Los Angeles ($k = 13$) counties. Because we were seeking recent-immigrant families, and because many Hispanic immigrants settle in heavily Hispanic areas (Stepick, Grenier, Castro, & Dunn, 2003), we selected schools where the student body was at least 75% Hispanic. The study was approved by the Institutional Review Boards at the respective Universities and by the Research Review Committees for each participating school district.

Because most new Hispanic immigrant students are enrolled in English for Speakers of Other Languages (ESOL) classes, we gave a brief presentation in each ESOL class about

the study and asked interested students to provide their primary caregiver's phone number. We also gave presentations in the basic-level English classes into which students would transition after completing the ESOL programme.

Staff members called parents to verify that the adolescent had been in the US for less than 5 years and that the family planned to remain in the South Florida or Southern California area during the course of the study. Parents whose adolescents met these inclusion criteria were invited to schedule evening or weekend assessment appointments at a convenient location. We received contact information for 632 adolescents who met inclusion criteria. Of these, 197 were unreachable, primarily because of incorrect or non-working telephone numbers. The remaining 435 families were reached by telephone and invited to participate. Of these 435 families, 69% (n = 302) participated in the study. Of the 133 families who met inclusion criteria and were contacted, but did not participate, 93 (65%) were unable to participate due to reported work or scheduling conflicts, 18 (13%) missed at least three scheduled assessment appointments, 1 (1%) was planning to move, 2 (2%) reported experiencing serious health problems and 19 (14%) declined without providing reason. For the baseline assessment, each adolescent received a voucher for a movie ticket. Parents also provided data for the larger study, but only adolescent data were used for this article.

Parents and adolescents provided informed consent and assent, respectively, in separate rooms in an effort to maintain privacy. If adolescents declined to provide assent, parents were told that the family did not meet inclusion criteria (to protect the adolescent's privacy). Each participant completed the assessment battery in English or Spanish, according to her/his preference. Because our sample included participants from two US cities and from several Latin American countries, four translators (two from each site, with diverse national origins) translated the English versions into Spanish simultaneously. To create a final Spanish version, the translators discussed and resolved discrepancies between their translated versions.

Measures

Unless otherwise specified, 5-point Likert scales were used for all study measures, with response options ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Alpha coefficients presented are from the current sample using the timepoint(s) at which the variable is included in our study model.

Bicultural identity integration—At each timepoint, BII was assessed using items from the Bicultural Identity Integration Scale (BIIS-1; Benet-Martínez & Haritatos, 2005). We used the five items that index high BII: "I feel that I am both a member of my heritage culture and an American"; "I feel part of a combined culture including both my heritage culture and American culture"; "I don't feel trapped between my heritage and American cultures; "I feel that my heritage and American identities are quite compatible" and "I feel like someone moving between two cultures—my heritage culture and American culture."

BII scores were used in the model at Times 1–5. Cronbach's alpha for Times 1–5 was .64 in English and .72 in Spanish. Although these alpha coefficients are somewhat low, they should be interpreted in light of the small number of items and the breadth of the BII construct.

Cultural identifications—Because the reliability of latent class procedures can be increased by including relevant covariates (Muthén & Muthén, 2010), and because cultural identifications are conceptually close to BII, heritage and US identity were used at baseline to predict membership in the BII trajectory classes. Heritage and US identifications were assessed using the multi-group ethnic identity measure (MEIM; Roberts et al., 1999) and the American identity measure (Schwartz et al., 2012). The American identity measure was adapted from the MEIM, with "the United States" inserted in place of "my ethnic group." Cronbach's alphas at baseline were: US identity: English .89, Spanish .88; heritage identity: English .85, Spanish .92.

Time 6 outcome variables—*Positive youth development* was operationalised as self-esteem, optimism and prosocial behaviour. *Self-esteem* was measured using the Rosenberg Self-Esteem Scale (α = .85 in English, .83 in Spanish), a 10-item measure tapping into how participants think of themselves in terms of overall competence and worthiness. *Optimism* was measured using the Children's Hope Scale (Edwards, Ong, & Lopez, 2007), which has been used with children and adolescents. This instrument consists of six items (α = .95 in English, .93 in Spanish) assessing the extent to which the person feels able to come up with ways to solve problems and circumvent obstacles. *Prosocial behavior* was measured using the prosocial tendencies measure (Carlo & Randall, 2002), a 19-item measure (α = .90 in English, .90 in Spanish) asking adolescents to report on their proclivity to help others in various situations (e.g. when someone is in dire need).

Family functioning was measured in terms of parental involvement with, positive parenting towards and communication with the adolescent. We also measured the adolescent's perception of whole-family communication (i.e. how various members of the family communicate with one another). *Parental involvement* (15 items; α = .89 in English, .92 in Spanish) and *positive parenting* (providing praise for appropriate behaviour; 9 items, α = .85 in English, .87 in Spanish) were measured using corresponding subscales from the Parenting Practices Scale (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996). Parent–adolescent communication was assessed using the Parent–Adolescent Communication Scale (20 items, α = .89 in English, .91 in Spanish; Barnes & Olson, 1982), which measures the extent to which parents and adolescents listen to and trust one another. *Whole-family communication* (3 items, α = .73 in English, .85 in Spanish) was measured using the Family Communication subscale from the Family Relations Scale (Tolan, Gorman-Smith, Huesmann, & Zelli, 1997). For the measures of parental involvement, positive parenting and parent–adolescent communication, adolescents were asked to report on their relationship with the person who functioned as their primary caregiver. A 4-point response scale was used for parental involvement, a 3-point scale for positive parenting and a 4-point scale for family communication.

RESULTS

Analytic plan

First, we conducted measurement invariance tests to ensure measurement equivalency of the BII construct at each timepoint (Little, 2013). Second, we estimated a series of latent class

growth analyses to determine the number and characteristics of empirically distinguishable trajectory classes (based on intercepts and slopes) in the sample (Nagin, 2005). Finally, we examined effects of trajectory class membership on the Time 6 outcome variables, controlling for baseline levels of the outcomes.

Step 1: Longitudinal invariance analyses

Following Little (2013), we tested for three levels of invariance: configural, metric and scalar. *Configural* invariance refers to the assumption that all of the items load onto the BII subscale at each timepoint. *Metric* invariance includes the additional assumption that each of the factor loadings is equivalent across time. *Scalar* invariance adds another assumption —that both the corresponding factor loadings and the corresponding item intercepts are equal across time. Comparing means over time, which is part of latent growth modelling, is warranted only if the assumptions of configural, metric and scalar invariance hold for at least the majority of items (Little, 2013).

To test for configural invariance, we started with a model where the latent subscale factor was attached to each of the indicator items at each of the first five timepoints (the timepoints where BII was used in the model). Residual terms for each indicator were allowed to correlate within each pair of timepoints, and each latent factor was allowed to correlate with itself across each pair of timepoints. The configural invariance model fit the data adequately, $\chi^2(254) = 408.40$, $p < .001$; comparative fit index (CFI) = .91; non-normed fit index (NNFI) = .89; root mean square error of approximation (RMSEA) = .045 (90% confidence interval (CI) = .037–.053, close fit probability = .85); standardized root mean square residual (SRMR) = .061. To test for metric invariance, we started with the configural invariance model and constrained each factor loading to be equal across time. We then compared the constrained (metric) and unconstrained (configural) models using standard invariance testing criteria: $\Delta\chi^2$ significant at $p < .05$, ΔCFI>.010 and ΔRMSEA>.010. If at least two of these three criteria were met, the null hypothesis of invariance would be statistically rejected. However, an assumption of partial metric invariance would be retained if the majority of loadings on each factor were found to be invariant across timepoints. We were not able to retain the assumption of full metric invariance, $\Delta\chi^2(16) = 41.84$, $p < .001$; ΔCFI = .015; ΔRMSEA = .023. However, freeing the factor loadings for items referring to not feeling trapped between one's heritage and receiving cultures, and to feeling as though one is moving between two cultures, permitted us to retain the assumption of partial metric invariance, $\Delta\chi^2(15) = 16.66$, $p = .34$; ΔCFI = .001; ΔRMSEA = .001. It is acceptable to use measures for which the assumption of partial invariance is retained (Little, 2013).

We followed a similar set of procedures to test for scalar invariance across time. We started with the metric invariance model and constrained each item intercept to be equal across timepoints. We then compared the constrained (scalar) and unconstrained (metric) models using the same fit index difference values used to evaluate the assumption of metric invariance. Across the five timepoints at which BII was used in the model, four of the 25 intercepts had to be freed for the assumption of partial scalar invariance to hold, $\Delta\chi^2(12) = 29.37$, $p = .003$; ΔCFI = .001; ΔRMSEA = .001.

Step 2: Latent class growth analysis

The second step of analysis was to estimate growth curve models for BII and to use latent growth class analysis (Nagin, 2005) to identify subgroups of participants who might have differed according to their intercepts and slopes. Following Nagin (2005), we fixed the slope variance to zero so that the classes extracted would be as homogeneous as possible in terms of their starting points and change trajectories.

We included heritage and US identity at baseline, and BII at the first five timepoints, to create the classes, but we did not include the outcome variables in creating the classes (see Figure 1). The inclusion of covariates helps to improve reliability and accuracy of the class solution, particularly, when the entropy value without these covariates is low (<.60). We did not include distal outcome variables in creating the classes because doing so causes the class solution to be conditioned on these outcome variables (Geiser, 2013). Our goal was to *predict* the outcomes based on the BII classes that emerged, such that the classes should be created independently from the outcome variables.

We used five criteria to decide on the number of classes to retain (Nylund, Asparouhov, & Muthén, 2007). First, the Vuong-Lo-Mendell-Rubin likelihood ratio test (LRT) indicates the extent to which the −2 log likelihood value for a model with k classes is significantly smaller than the corresponding value for a model with k-1 classes. Second, the sample-size-adjusted Akaike Information Criterion (AIC) and Bayesian Information (BIC) provide an additional basis for comparing models, where lower values indicate better fit. Third, to ensure stability of the class solution, each class had to represent more than 5% of the sample. Fourth, classes had to be substantively different from one another (i.e. one class could not simply be a variant on another class). We evaluated this fourth criterion in terms of overlap between intercepts and slopes across classes. Fifth, entropy values and posterior probabilities of correct classification should be .70 or higher. In cases where entropy is lower than .70, posterior class membership probabilities should be used as weighting variables (Bandeen-Roche, Miglioretti, Zeger, & Rathouz, 1997).

Based on these criteria, we extracted a two-class solution, $LRT = 217.28$, $p < .001$ (see Figure 2). The entropy value was .68 and posterior classification probabilities ranged from .90 to .91. The first class represented 57.3% of the sample ($n = 173$) and the second class represented 42.7% of the sample ($n = 129$). The intercept and linear slope for Class 1 were 11.2 ($p < .001$) and 0.12 ($p = .15$), respectively. The intercept and linear slope for Class 2 were 14.8 ($p < .001$) and −0.07 ($p = .55$), respectively. Because neither of the slope terms was statistically significant, it appears that the primary difference between the two classes was in their intercepts. We named the classes Lower BII (Class 1) and Higher BII (Class 2). An invariance test indicated that this class solution fit the data equivalently across sites, $\Delta\chi^2(4) = 6.23$, $p = .18$. At baseline, the Lower BII class averaged 2.2 on a 1–5 scale, and the Higher BII class averaged 3.

Heritage and US identity at baseline were used as predictors of trajectory class membership. Relative to the Lower BII class, both US identity, $OR = 1.12$ (95% CI = 1.06–1.25), $p < .001$, and heritage identity, $OR = 1.15$ (95% CI = 1.06–1.19), $p < .001$, emerged as significant positive predictors of membership in the Higher BII class.

Class membership differed significantly by site, $\chi^2(1, N = 302) = 13.98$, $p < .001$, $\varphi = .22$. Forty-seven percent ($n = 71$) of the Miami sample, compared to 68% ($n = 102$) of the Los Angeles sample, was classified into the Lower BII class. A follow-up comparison between Cuban and Mexican adolescents indicated that Cubans (41%) were significantly less likely than Mexicans (58%) to be classified into the Lower BII class, $\chi^2(1, N = 201) = 17.54$, $p < .001$, $\varphi = .30$. We therefore controlled for site (as well as gender and years in the US, which may be related to acculturative processes) in all subsequent analyses.

Step 3: Comparing the classes on Time 6 outcomes

Finally, we compared the two classes on the outcome variables at Time 6. All of the separate outcomes were used as manifest variables, rather than creating a latent variable for each group of outcomes, because the variables included within each group (e.g. self-esteem and optimism) may differ from one another in important ways.

To examine predictive effects between BII class membership and Time 6 outcome variables, we classified each individual into a trajectory class based on her/his highest posterior probability of belonging to each class. To ensure that the uncertainty of class membership was taken into account, we used the posterior probabilities of belonging to each class as weighting variables (Bandeen-Roche et al., 1997). Site, gender and years in the US were used as covariates, along with baseline levels of the outcome variables. To avoid Type I error inflation associated with using multiple models for a single hypothesis, we included all variables in a single model using Mplus 7.0 (Muthén & Muthén, 2010).

Table 1 and Figure 3 present the results of these analyses. Compared with the Lower BII class, the Higher BII class scored significantly higher on indices of self-esteem, optimism, prosocial behaviour, parental involvement, parent–adolescent communication and overall family communication. The class difference for positive parenting approached significance ($p = .07$).

DISCUSSION

This study examined over-time trajectories of BII, and whether these trajectories predicted positive youth development and family functioning in a sample of recently immigrated Hispanic adolescents in Miami and Los Angeles. The study was organised into three parts: (a) ascertaining the consistency of the factor structure of BII over time, (b) identifying latent trajectory classes and (c) mapping the links between these classes and indices of positive youth development and family functioning. Developing an integrated bicultural identity—reconciling *one's* cultural heritage with the cultural context of the country or region where one or one's family has settled—is a critical challenge for immigrants (especially for adolescent and young adult immigrants). Biculturalism is the most commonly endorsed approach to acculturation among young immigrants (Sam & Berry, 2010) and is associated with the most favourable social and mental health outcomes (Nguyen & Benet-Martínez, 2013). BII extends the construct of biculturalism even further, where individuals exposed to multiple cultures can be characterised based on the extent to which they can integrate their heritage and receiving cultures; and to view these cultures as compatible with one another. Research suggests that a more integrated form of bicultural identity allows immigrants to

respond most appropriately to cues related to both their heritage culture and to the society in which they have settled (Benet-Martínez et al., 2002) and reduces stress associated with managing two cultural streams (Chen et al., 2008). However, biculturalism and BII have rarely been studied longitudinally.

Factor structure of BII over time

We found that the factor structure of BII was largely consistent over time, suggesting that as recently immigrated Hispanic adolescents spend more time in the US, the nature of the psychological processes involved in becoming an integrated bicultural person remains largely the same. Adolescents are charged with learning to reconcile their cultural heritage with US culture, to feel comfortable moving between the two cultural contexts, and to integrate the two cultural streams within their sense of self. However, two of the BII items were less consistent over time in their factor loadings, suggesting that some of these challenges *do* change form. Specifically, not feeling trapped between cultures appears to wax and wane in importance across the five timepoints (standardised factor loadings were .31, .21, .42, .42 and .29). Feeling as though one is able to move between two cultures is associated with standardised loadings between .44 and .49 across all timepoints except for Time 4 (when the loading was .34). The precise meaning of these changes in factor loadings across time is not immediately clear. More research is necessary to understand how the meaning and affective valence of BII changes across time for immigrant adolescents. Because the factor loadings remained fairly similar over time, it is possible that the differences in loadings across time reflect random fluctuations. Replication with a new sample would be necessary to examine this.

BII trajectory classes

We found two BII trajectory classes: a “lower” class with a mean response of 2.2 on a 0–4 scale, and a “higher” class with a mean response of 3.0. BII scores generally did not change over time, suggesting that, at least over a two-and-a-half year period, BII may represent an individual-difference construct among recently immigrated Hispanic adolescents. That is, the way in which a given adolescent addresses the task of developing a bicultural identity may appear shortly after immigration (and may be a function of events that occurred prior to arrival in the US). The trajectory of BII therefore appears to be characterised by stability over time, at least in this sample. Such a conclusion does not contraindicate changes in endorsement of US or Hispanic cultural streams over time; BII is not synonymous with the extent to which one identifies with one’s cultural heritage and with the country or region in which one has settled. Rather, an adolescent can increasingly endorse one or both cultural streams strongly but still not be comfortable integrating them. It appears that the ability to integrate multiple cultures may be stable over time, even if endorsement of those cultures changes. This finding suggests that BII may be more of an individual-difference construct than a developmental construct. Individuals who maintain high BII scores over time appear to enjoy more positive family relationships and to report more adaptive mental health outcomes later in adolescence. It is, however, possible that interventions could facilitate changes in BII. Short-term primes—such as asking participants to think of positive or negative biculturalism-related experiences—can increase or decrease BII (Cheng & Lee, 2013). However, it is not known whether these short-term primes can have long-term

impacts, or whether different interventions would be needed to achieve long-term changes in BII.

Unexpectedly, although the structure of the BII trajectory class solution was equivalent across sites, there were strong site differences in terms of representation of each site within each class, with Miami participants more likely to be in the Higher BII class. These differences appeared to be at least somewhat explainable in terms of more favourable BII trajectories for Cubans in Miami than for Mexicans in Los Angeles.[1] Miami is a highly bicultural city where the majority of political and economic power is held by Cuban Americans and where Spanish is widely spoken in public (Stepick et al., 2003). Los Angeles, on the other hand, presents a more ambivalent welcome for Hispanics—particularly Mexicans. Laws have been passed to discourage undocumented immigration in the past two decades, Mexicans face more economic challenges, and the cultural context is less friendly to Spanish and to other expressions of Hispanic culture (Light, 2006). Although these differences between Los Angeles and Miami (and the largest Hispanic groups within these respective cities) may not necessarily involve overt discrimination, they may affect the ease and viability of BII by creating a greater contrast between the immigrant and US cultural contexts.

BII trajectories and psychosocial functioning

A consistent set of differences emerged between the two BII classes in all three indices of positive youth development (self-esteem, optimism and prosocial behaviour) and in all four indices of family functioning (parental involvement, positive parenting, parent–adolescent communication and overall family communication). The Higher BII class was significantly higher on all of these variables—suggesting that being more adept at integrating one's heritage and US cultural streams, and moving fluidly between the two cultures as needed, is linked with higher self-esteem, more optimism, a greater propensity to help others and more favourable family relationships among recent-immigrant Hispanic adolescents. For these adolescents, the tasks involved in BII involve feeling comfortable with and proficient both in one's cultural heritage, which is likely maintained by parents and other family members, and in US culture, which is likely endorsed by many peers, media and other "mainstream" social institutions. Feeling at ease within both cultures, and maintaining this sense of ease over time, appears to be linked with more positive views of oneself, a more favourable view of one's future and better family relationships. Because the participants in our study were recent immigrants, becoming bicultural while maintaining harmonious family relationships is an important developmental task (Smokowski & Bacallao, 2011). Our results suggest that the ability to integrate one's heritage and receiving cultural streams may lead to more positive family relationships.

It is worth noting that baseline levels of both heritage and US identity were predictive of membership in the Higher BII class, which then predicted more favourable scores in mental health and family functioning at Time 6. One future direction to explore might be the extent to which BII trajectory classes *mediate* the effects of heritage and US identity on later

[1]Because we controlled for the outcome variables at baseline, we can be confident that differences in BII trajectory class were not due to site differences.

mental health and family functioning. That is, might identifying with both the US and one's culture of origin predict favourable mental health and family functioning through helping immigrant adolescents to integrate and reconcile their two cultural backgrounds?

Limitations and future directions

The present results should be considered in light of some important limitations. First, the sample represents a somewhat narrow slice of the US Hispanic population. Most Hispanic adolescents in the US either are US-born or immigrated as young children (Fry & Passel, 2009). Fewer families immigrate with preadolescent or adolescent children. Further, many Hispanics are bypassing traditional gateway cities such as Miami and Los Angeles and are settling in "new receiving communities" in the Midwest and Deep South (Ennis, Rios-Vargas, & Albert, 2011). Although the Hispanic populations in Miami, Los Angeles, New York, Chicago and other gateway cities are continuing to increase, it is also critical to study acculturation and biculturalism in new receiving contexts.

Second, the time frame examined was somewhat short (3 years total). Longer spans of time might have allowed us to observe changes in BII. However, adolescents in Miami had been in the US for a median of 1 year at baseline, and adolescents in Los Angeles had been in the US for a median of 3 years at baseline. Three years of our study therefore represented half or more of the time that these adolescents had spent in the country at the time the study ended. Perhaps, BII is fairly stable in the first few years following immigration but begins to change after youth have spent more time in the US longer-term studies are needed to ascertain this possibility.

Third, the range of ages at which participants migrated to the US (9–17) is both strength and a limitation. As a strength, we were able to examine trajectories of BII, and their effects on mental health and family functioning, within a sample that was somewhat heterogeneous in terms of ages at arrival. We were also able to control for years in the US, which was strongly correlated ($r = .91$) with age at arrival. As a limitation, we do not know whether other variables associated with age at arrival (e.g. breadth of experiences in the heritage country) might have impacted our results.

Fourth, the reliability coefficient for BII was somewhat low. This low reliability may be due to the small number of items used, as well as to "double-barreled" items that combine two statements into one. Although our results are largely consistent with theory, it is not known how the results might have differed had a more internally consistent measure of BII been used. These results should thus be considered preliminary, and replication with other BII measures is essential. The reliability for whole-family communication was also low. The fact that whole-family communication loaded onto a family functioning factor comprised of more internally consistent scales may, however, provide confidence that whole-family communication was measured appropriately.

CONCLUSIONS

Despite these limitations, this study traced the development of BII in recently immigrated Hispanic adolescents and has suggested divergent paths that these adolescents may follow

as they adapt to life in the US. Although the two BII trajectory classes did not involve change over time, they clearly differed on indices of positive youth development and family functioning. A greater tendency to integrate one's heritage and US cultural streams appears to facilitate adjustment and family relationships, whereas an inability or unwillingness to integrate one's cultural streams may be problematic for immigrant adolescents living in bicultural contexts, because it may interfere with positive functioning (Benet-Martínez et al., 2002). The confluence of experimental—and now longitudinal—evidence supporting this proposition may be interpreted as providing further documentation of the importance of BII.

We hope that this study will inspire additional work examining the specific age periods, contexts and cultural groups in which biculturalism generally (and BII specifically) is more versus less protective. Because biculturalism is adopted by the majority of young immigrants, it is essential to identify the strengths and cautions associated with different variants of biculturalism.

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REFERENCES

Bandeen-Roche K, Miglioretti DL, Zeger SL, & Rathouz PJ (1997). Latent variable regression for multiple discrete outcomes. Journal of the American Statistical Association, 92, 1375–1386.

Barnes HL, & Olson DH (1982). Parent-adolescent communication and the circumplex model. Child Development, 56, 438–447.

Benet-Martínez V, & Haritatos J. (2005). Bicultural identity integration (BII): Components and psychosocial antecedents. Journal of Personality, 73, 1015–1050. [PubMed: 15958143]

Benet-Martínez V, Leu J, Lee F, & Morris MW (2002). Negotiating biculturalism: Cultural frame switching in biculturals with oppositional versus compatible cultural identities. Journal of Cross-Cultural Psychology, 33, 492–516.

Carlo G, & Randall BA (2002). The development of a measure of prosocial behaviors for late adolescents. Journal of Youth and Adolescence, 31, 31–44.

Chen SX, Benet-Martínez V, & Bond MH (2008). Bicultural identity, bilingualism, and psychological adjustment in multicultural societies: Immigration-based and globalization-based acculturation. Journal of Personality, 76, 803–838. [PubMed: 18482355]

Cheng C-Y, & Lee F. (2013). The malleability of bicultural identity integration (BII). Journal of Cross-Cultural Psychology, 44, 1235–1240.

Cheung BY, Chudek M, & Heine SJ (2011). Evidence for a sensitive period for acculturation: Younger immigrants report acculturating at a faster rate. Psychological Science, 22, 147–152. [PubMed: 21189354]

Edwards LM, Ong AD, & Lopez SJ (2007). Hope measurement in Mexican American youth. Hispanic Journal of Behavioral Sciences, 29, 225–241.

Ennis SR, Rios-Vargas M, & Albert NG (2011). The Hispanic population, 2010 (Census brief C2010BR-4). Washington, DC: US Census Bureau.

Erikson EH (1950). Childhood and society. New York, NY: Norton.

Fry R, & Passel JS (2009). Latino children: A majority are US-born offspring of immigrants. Washington, DC: Pew Hispanic Center.

Geiser C. (2013). Data analysis with Mplus. New York, NY: Guilford.

Gorman-Smith D, Tolan PH, Zelli A, & Huesmann LR (1996). The relation of family functioning to violence among inner-city minority youth. Journal of Family Psychology, 10, 115–129.

Hofstede G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations. Thousand Oaks, CA: Sage.

Light IH (2006). Deflecting immigration: Networks, markets, and regulation in Los Angeles. New York, NY: Russell Sage Foundation.

Little TD (2013). Longitudinal structural equation modeling. New York, NY: Guilford.

Muthén LK, & Muthén BO (2010). Mplus user's guide version 6. Los Angeles, CA: Muthén and Muthén.

Nagin DS (2005). Group-based modeling of development. Cambridge, MA: Harvard University Press.

Nguyen AD, & Benet-Martínez V. (2013). Biculturalism and adjustment: A meta-analysis. Journal of Cross-Cultural Psychology, 44, 122–159.

Nylund K, Asparouhov T, & Muthén B. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. Structural Equation Modeling, 14, 535–569.

Phinney JS, & Ong AD (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. Journal of Counseling Psychology, 54, 271–281.

Roberts RE, Phinney JS, Masse LC, Chen YR, Roberts CR, & Romero A. (1999). The structure of ethnic identity of young adolescents from diverse ethnocultural groups. The Journal of Early Adolescence, 19, 301–322.

Sam DL, & Berry JW (2010). Acculturation: When individuals and groups of cultural backgrounds meet. Perspectives on Psychological Science, 5, 472–481. [PubMed: 26162193]

Schwartz SJ (2005). A new identity for identity research: Recommendations for expanding and refocusing the identity literature. Journal of Adolescent Research, 20, 293–308.

Schwartz SJ, Beyers W, Luyckx K, Soenens B, Zamboanga BL, Forthun LF, Hardy SA, Vazsonyi T, Ham LS, Kim SY, Whitbourne SK, & Waterman AS (2011). Examining the light and dark sides of emerging adults' identity: A study of identity status differences in positive and negative psychosocial functioning. Journal of Youth and Adolescence, 40, 839–859. [PubMed: 21088875]

Schwartz SJ, Park IJK, Huynh Q-L, Zamboanga L, Umaña-Taylor AJ, Lee RM, Rodriguez L, Kim SY, Whitbourne SK, Castillo LG, Weisskirch RS, Vazsonyi AT, Williams MK, & Agocha VB (2012). The American Identity Measure: Development and validation across ethnic subgroup and immigrant generation. Identity: An International Journal of Theory and Research, 12, 93–128.

Schwartz SJ, Unger JB, Des Rosiers SE, Lorenzo-Blanco EI, Zamboanga BL, Huang S, Baezconde-Garbanati L, Villamar JA, Soto DW, Pattarroyo M, & Szapocznik J. (2014). Domains of acculturation and their effects on substance use and sexual behavior in Hispanic recent immigrant adolescents. Prevention Science, 15, 385–396. [PubMed: 23828449]

Schwartz SJ, Unger JB, Zamboanga BL, & Szapocznik J. (2010). Rethinking the concept of acculturation: Implications for theory and research. American Psychologist, 65, 237–251. [PubMed: 20455618]

Smokowski PR, & Bacallao ML (2011). Becoming bicultural: Risk, resilience, and Latino youth. New York: New York University Press.

Stepick A, Grenier G, Castro M, & Dunn M. (2003). This land is our land: Immigrants and power in Miami. Berkeley: University of California Press.

Syed M, & Mitchell LL (2013). Race, ethnicity, and emerging adulthood: Retrospect and prospects. Emerging Adulthood, 1, 83–95.

Tolan PH, Gorman-Smith D, Huesmann RL, & Zelli A. (1997). Assessment of family relationship characteristics: A measure to explain risk for antisocial behavior and depression among urban youth. Psychological Assessment, 9, 212–223.

Triandis HC (1995). Individualism and collectivism. Boulder, CO: Westview Press.

Walters NP, & Trevelyan EN (2011). The newly arrived foreign born population of the United States: 2010 (Census Brief ACSBR/10–16). Washington, DC: US Census Bureau.

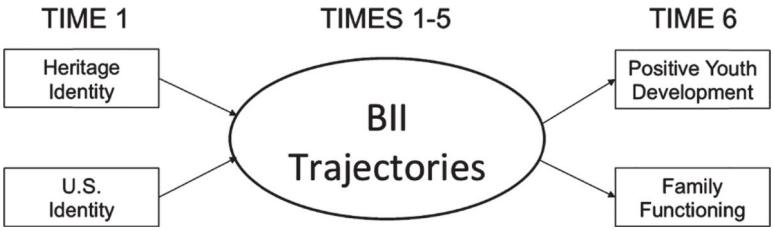

Figure 1.

Conceptual model. Note: Time 6 outcomes in this figure represent groups of manifest variables, not latent variables.

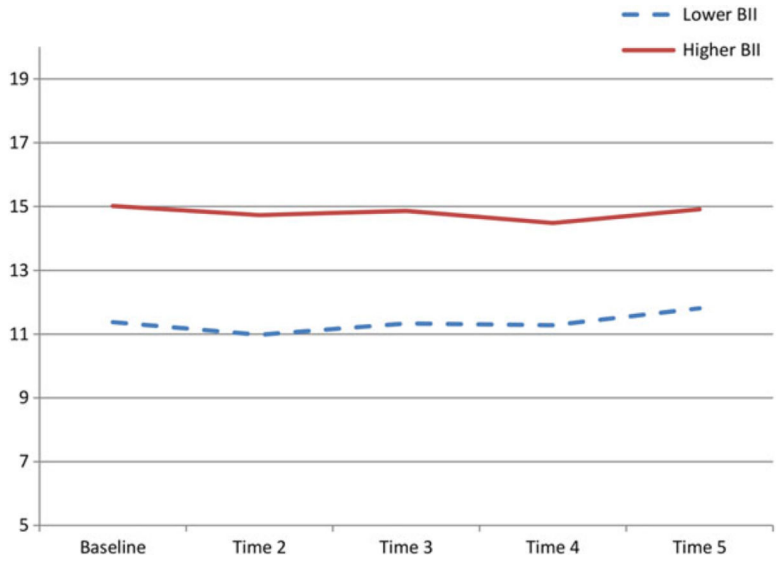

Figure 2.
Latent trajectory class solution.

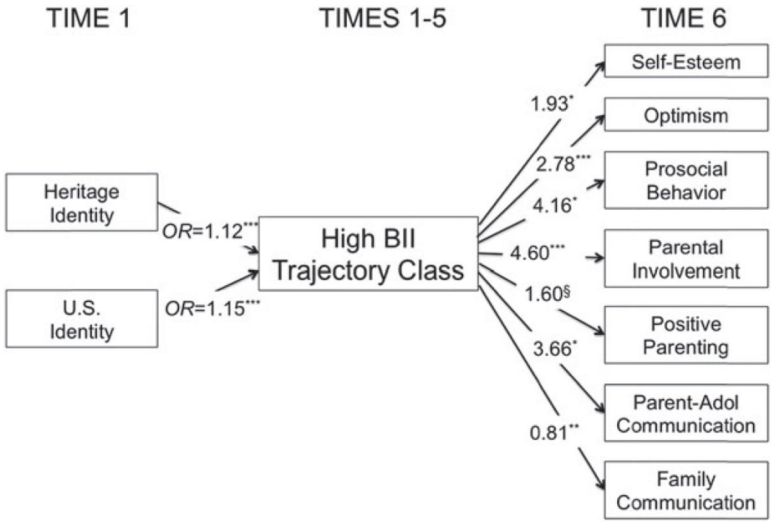

Figure 3.

Model results. *Note:* Values are unstandardised regression weights unless otherwise specified. §$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 1

Time 6 observed variables (means or percentages) by BII trajectory class

Variable	Range of possible scores	BII trajectory class (count, percentage of sample)		B (compared to low BII class)[a]
		Lower (n = 173; 57.3%)	Higher (n = 129; 42.7%)	
Self-esteem	10–50	28.85 (6.89)	30.94 (6.75)	$B = 1.93$, $p < .03$
Optimism	5–30	21.93 (5.81)	25.32 (5.41)	$B = 2.78$, $p < .001$
Prosocial behaviour	19–95	52.81 (12.65)	57.60 (16.64)	$B = 4.16$, $p < .03$
Parental involvement	13–52	38.86 (10.62)	45.27 (9.87)	$B = 4.60$, $p < .001$
Positive parenting	9–27	21.42 (6.95)	23.63 (8.07)	$B = 1.60$, $p = .07$
Parent–adolescent communication	20–100	68.34 (12.80)	73.45 (13.98)	$B = 3.66$, $p < .03$
Family communication	3–12	8.95 (2.13)	9.95 (2.10)	$B = 0.81$, $p < .005$

BII = bicultural identity integration.

[a]Adjusted for site, gender and years in US, as well as baseline levels of the dependent variable.