Published in final edited form as:

J Community Psychol. 2005 March ; 33(2): 157–174.

A PERSON-CENTERED AND ECOLOGICAL INVESTIGATION OF ACCULTURATION STRATEGIES IN HISPANIC IMMIGRANT YOUTH

J. Douglas Coatsworth and **Mildred Maldonado-Molina**

Pennsylvania State University

Hilda Pantin and **José Szapocznik**

University of Miami School of Medicine

Abstract

Understanding the processes of acculturation in ethnic minority populations is one of the central tasks of crosscultural research. Addressing challenges of theory, methods, and application in acculturation research requires ongoing advancements in methods and theoretical and model development. The current study was designed to explain a person-centered approach to investigating acculturation and biculturalism and to illustrate this method with a sample of 315 Hispanic youth. Pattern analyses of the Hispanicism and Americanism scores from the Bicultural Involvement Scale yielded four distinct acculturation types, including one characterized by moderate scores on both scales. Relations between acculturation types and indicators of individual, family, and peer adaptation were tested. Results indicated that bicultural youth tended to show the most adaptive pattern of functioning across multiple sociocultural domains. Assimilated youth did not show as strongly negative a pattern as has been reported elsewhere. Implications and benefits of a person-centered approach are discussed.

Over the last decade, the United States Hispanic population increased by 57% with a high percentage of this growth due to immigration (Guzmán, 2001). This increase has focused renewed research attention on Hispanic immigrants' adaptation to the American culture. One of the most widely acknowledged and researched aspects of the immigrant experience is the process of "acculturation" (Berry, 2003; Santisteban, Muir-Malcolm, Mitrani, & Szapocznik, 2001). Acculturation was originally defined in the psychological literature as a unidimensional process in which exposure to a new cultural system leads members of an immigrant group to adopt the attitudes, values, and behaviors of the dominant group (Rogler, Malgady, & Rodriguez, 1989). It is now commonly viewed as a multidimensional process in which one maintains aspects of their culture of origin while also adopting elements the new cultural group (Berry, 1997; Rogler, Cortés, & Malgady, 1991; Szapocznik, Kurtines, & Fernandez, 1980). The multidimensional model, often referred to as a bicultural model, poses important measurement challenges to the field (Zane & Mak, 2003), but also highlights potential benefits of expanding the strategies by which acculturation is studied to include more holistic, person-oriented models (Magnusson, 2000) and placing greater attention on the broad social ecological processes that are influenced by different multidimensional strategies. The current study was designed to extend the program of acculturation research with Hispanic families conducted at

Correspondence to: J. Douglas Coatsworth, 110 South Henderson Building, Pennsylvania State University, University Park, PA 16802.
E-mail: jdc15@psu.edu.

Preparation of this article was supported by Center for Substance Abuse Prevention grant 1 UR6 SPO7961 and by NIMH Grant No 1 R01 MH 63042 to José Szapocznik, Principal Investigator. Mildred Maldonado-Molina's efforts were supported by the Center for Prevention Methodology at Penn State and by National Institute on Drug Abuse Center Grant P50DA 10075 to Linda M. Collins, Principal Investigator.

the Center for Family Studies in Miami (see Coatsworth, Szapocznik, Kurtines, & Santisteban, 1997) by (a) describing the utility of a person-centered approach for acculturation research and (b) illustrating this method's relevance by examining the relations between acculturation styles and a wide range of indicators of sociocultural adaptation using a sample of Hispanic adolescents.

MEASURING ACCULTURATION AND BICULTURALISM IN HISPANICS

Operationalizing, assessing, and analyzing the processes of acculturation in a way that both reflects and extends current theory is an ongoing challenge for researchers. The result is a broad array of measures and analysis strategies that may reflect different theoretical models of acculturation for different groups of individuals. For example, acculturation measures for Hispanics may contain items reflecting a variety of psychosocial domains (e.g. language, values, behavioral preferences), may be oriented toward immigrants from specific regions (e.g. Mexicans, Cubans, Central Americans), or may adhere to a unidimensional (Marín, Sabogal, VanOss Marín, Otero-Sabogal, & Pérez-Stable, 1987; Szapocznik, Scopetta, Kurtines, & Aranalde, 1978) or multidimensional model (Marín & Gamba, 1996; Szapocznik et al., 1980) of acculturation (see Zane & Mak, 2003 for review).

The Center's research on acculturation has helped bridge theory, measurement, and intervention with Hispanic families (Coatsworth et al., 1997). Briefly, to study the disruptions evident in the immigrant Hispanic families being treated in the Center's clinic (Scopetta & Allegre, 1975) required developing the "Behavioral Acculturation Scale," a measure consistent with our early unidimensional model of acculturation processes (Szapocznik et al., 1978). The emerging multicultural social context of Miami consequently led to the development of a conceptual model and measurement strategy of biculturalism that assumed acculturation for Hispanic youth occurred along two relatively separate dimensions: *Hispanicism*, reflecting socialization to the Hispanic way of life, and *Americanism*, reflecting acculturation to the Anglo-American way of life (Szapocznik & Kurtines, 1979; Szapocznik et al., 1980). The measure that was created from this conceptual model, The Bicultural Involvement Questionnaire (BIQ; Szapocznik et al., 1980) is one of only a few measures that tap the bidimensional nature of the process of acculturation in Hispanics (Zane & Mak, 2002). The BIQ has proved useful to the Center's theoretical and empirical work linking acculturation to adolescent problem behavior through the development of intergenerational acculturation differences in the family (Szapocznik & Kurtines, 1979; Szapocznik et al., 1980) and to the development of interventions (e.g. Family Effectiveness Training, Bicultural Effectiveness Training) to address intergenerational acculturation problems (Szapocznik et al., 1986; Szapocznik, Santisteban, Rio, & Perez-Vidal; 1989).

The BIQ obtains separate scale scores for Hispanicism and Americanism and recommends combining these to form two additional scores (Szapocznik et al., 1980). One recommended composite scale, the "biculturalism" score, is computed by subtracting Americanism from Hispanicism and thus, ranges from monoculturalism in the Hispanic direction to monoculturalism in the American direction. The second recommended scale, "cultural involvement," is computed by summing the two scores, with higher scores representing greater cultural involvement and lower scores representing cultural marginality. Scores have been employed in studies using variable and person-centered approaches. Szapocznik and colleagues used median splits to examine adaptation for youth from different acculturation patterns (bicultural high or low, monocultural high or low). Although these scales were intended to be used in combination, frequently a single biculturalism scale is computed and used in the analyses (Gomez & Fassinger, 1994). One problem with this approach is that two individuals may obtain a similar bicultural score with different patterns of Hispanicism and Americanism scores. Alternative person-oriented conceptual and analytic strategies allows for

analysis of all the information from multiple dimensions (not median split) and shifts the main conceptual and analytic unit from the variable to the individual (see Cairns, Bergman, & Kagan, 1998).

A PERSON-ORIENTED APPROACH TO ACCULTURATION

Consistent with the philosophy of a person-oriented approach (Cairns, et al., 1998; Magnusson, 1998, 2000), investigators have proposed that the two underlying dimensions of acculturation intersect to define four different types of acculturation strategies (Berry, 1980; 2003; Santisteban et al., 2001). “Bicultural” reflects active involvement in both the culture of origin and the host culture. A strategy of “Assimilation” is defined when an individual does not maintain connections with their culture of origin and seeks out strong connections with the host culture. “Separation/Withdrawal” reflects an individual’s desire to hold strongly to their culture of origin while avoiding involvement in the host culture. Finally, “Alienation/Marginalization” is a strategy in which there is little maintenance of original culture and little participation in the new culture. The four types of acculturation strategies provide a useful heuristic from which to view patterns of acculturation across individuals. Although these four rationally derived types may be conceptually meaningful, it is possible that across the full spectrum of possible scores on the BIQ dimensions of Hispanicism and Americanism, more patterns of acculturation strategies would be evident. The current study investigated whether results from a “person-oriented” analysis would correspond to the four types described by Berry (1980) and Santisteban et al. (2001).

A SOCIAL-ECOLOGICAL PERSPECTIVE AND ACCULTURATION

The literature on the correlates of acculturation and biculturalism is weighted heavily towards examining how these variables are related to individual “psychological adaptation” (Searle & Ward, 1990) such as mental health problems or well-being (Balls Organista, Organista, & Kurasaki, 2003; Rogler, Cortés, & Malgady, 1991). Higher “Americanism” in immigrant youth has been shown to be related to higher rates of adolescent substance use (Epstein, Dusenbury, Botvin, & Diaz, 1996; Vega & Gill, 1998; Vega, Gill, Warheit, Zimmerman, & Apospori, 1993), conduct problems or delinquency (Szapocznik et al., 1980; Vega et al., 1993), depression (Kaplan & Marks, 1990), feelings of loneliness and alienation (Suarez, Fowers, Garwood, & Szapocznik, 1997), and other mental health problems (Burnam et al., 1987). In contrast, bicultural youth appear to have lower rates of these problems and demonstrate higher levels of competence and achievement styles (Birman, 1998; Birman, Trickett, & Vinokurov, 2002; Gomez & Fassinger, 1994; Szapocznik et al., 1980).

Less is known about how patterns of acculturation are related to indicators of “sociocultural adaptation,” defined as adjustment to the social demands of every day life in such areas as family, work, and school (Searle & Ward, 1990, Ward, 1996). Some literature does suggest that acculturation styles in Hispanics are related to family functioning (Santisteban et al., 2001; Szapocznik et al., 1980), school performance (Gomez & Fassinger, 1994), and peer relations (Birman, 1998). Integrating acculturation research with broader ecological models of development (Birman et al., 2002; Szapocznik & Coatsworth, 1999) provides a structure for developing and testing clearer hypotheses about the mechanisms by which acculturation experiences are linked to psychological outcomes (De La Rosa, Vega, & Radisch, 2000; Santisteban, Coatsworth, Briones & Szapocznik, 2004; Gill, Wagner, & Vega, 2000).

THE CURRENT STUDY

The current study was guided by two primary aims linked to our two goals of describing and illustrating the utility of a person-centered approach for acculturation research. The first aim investigated whether a person-centered analytic approach to the Hispanicism and Americanism

subscales of the BIQ would produce patterns that approximate the four-group model proposed by Berry (1980) and by Santisteban et al. (2001). Our empirical understanding of the distribution of the scores on the two dimensions of the BIQ in several samples of Hispanic youth (Santisteban et al., 2003; Szapocznik et al., 1980) suggested that the number of patterns might differ from the four types described by Berry and Santisteban. Specifically, we hypothesized that in addition to individuals with combinations of high and low scores on the two dimensions that would produce the four types, individuals with moderate scores on one or both of the scales might converge into additional pattern types.

The second aim was to compare groups of youth with similar acculturation styles on indicators of functioning across multiple ecodevelopmental domains. Based on the extant literature, four partially competing hypotheses were tested. Hypothesis 1 proposed that “assimilated” youth would have poorer sociocultural adaptation than youth from all other styles. We predicted this would be true in both in the individual (Balls Organista et al., 2003) and other ecological domains (Gill et al., 2000; Santisteban et al., 2001).

Hypotheses 2 predicted that high levels of Hispanicism are protective against the risk of an assimilative style and we tested this by comparing Assimilated youth to Bicultural youth. The strong identification with traditional Hispanic values and customs may relate to lower levels of problems across domains (Vega et al., 1998).

Hypotheses 3 proposed that the combination of high Hispanicism and high Americanism (biculturalism) is protective for youth in general. In a multicultural context such as the one in which this study was conducted, flexibility to interact fluidly in both cultures is likely to promote better adaptation (Berry, 2003; Birman, 1998).

Hypothesis 4 proposed that strong involvement in one *or* the other culture could be adaptive in some domains. We proposed that in contrast to social demands of becoming bicultural, high levels of involvement in at least one culture in a multicultural context might promote better adaptation than being less involved in either.

METHOD

Overview and Setting

The data for this study were gathered in two preventive intervention projects (Latinas: Supportive Connections for Growth, and Familias Unidas/Structural Ecosystems Preventive Intervention) conducted by the Center for Family Studies at the University of Miami School of Medicine (see Coatsworth, Pantin, McBride, Briones, & Szapocznik, 2002; Coatsworth, Pantin, & Szapocznik, 2002). Both projects targeted Hispanic middle school students from neighborhoods characterized by high-population density, high crime, low-income, and high proportion of immigrant families. Permission was obtained from the Dade County Public School system to recruit the adolescents through the personnel at five middle schools that served those neighborhoods. Institutional Review Board approval, parent consents, and adolescent assents were also obtained prior to collecting data. Data used in this cross-sectional study were collected at the baseline assessment, prior to any intervention activities.

Participants

Participants for this study included 315 Hispanic adolescents (101 boys; 214 girls) and their primary caregivers. The number of participants was approximately equal across the two studies; 149 from Latinas, and 166 from Familias Unidas/SEPI. The average age of the sample was 12.5 years ($SD = .91$, range 10.25–14.5). The sample is comprised largely of immigrant families; representative of recent immigrants to South Florida; 96% of the parents and 59% of the adolescents were born outside of the U.S. The ethnic distribution of the entire sample is

consistent with the neighborhoods from which it was drawn; 34.7% Nicaraguan, 26.8% Cuban, 17.4% other Central American, 11% South American, and 6.6% other Caribbean (e.g., Puerto Rican, Dominican). On average the adolescents had been living in the United States for 7.8 years, with approximately one-third residing in the country for less than 5 years. Among the U.S.-born youth, the majority identified as Cuban (40%), with smaller percentages of Nicaraguan (10.8%), Central American (6.9%), and Puerto Rican (6.2%). Among the foreign-born youth, most were from Nicaragua (47.8%), Cuba (17.9%), or Central America (14.7%). These rates of nativity are consistent with the changing immigration patterns of the Miami area. Seven percent of the parents reported that they spoke mostly English in the home with the remaining speaking mostly Spanish (57%) or about the same English and Spanish (36%). The modal level of parent education was completion of the 12th grade (29.2%), with a substantial percentage obtaining only elementary or some high school education (42.9%), and the remaining (27.9%) receiving some post-secondary school education including college or graduate school. The majority of parents were employed in unskilled or semi-skilled labor positions. The median yearly income of the families was \$10,000–\$14,999, ranging from less than \$5,000 per year to \$50,000 and above per year.

Procedures

Participant recruitment differed slightly across the two studies. In the Latinas project, students were recruited through teacher and counselor referrals at three middle schools (sixth–eighth graders). Approximately 95% of the girls at the schools were referred to the project, of which approximately one-third met eligibility criteria, enrolled in the study and participated in the first assessment. In the Familias Unidas project, all Hispanic families with adolescents in the sixth- or seventh-grade classrooms at three different middle schools were recruited via letters sent through the U.S. mail and sent home in beginning-of-the-year school packets. Of the 475 parents who returned the letters, 330 (69.4%) indicated interest in participating. Of those, 167 met inclusion criteria and produced baseline data. The primary reasons for noninclusion were parents' schedule conflicts (15%), unresponsiveness to letters and phone calls from project staff (10%), parents deciding not to enroll in the program (8%), moving out of the catchment area (6%), invalid phone numbers or addresses (5%), and current treatment for family crises or psychological disorders (5%).

Trained bilingual (Spanish and English) assessors administered informed consent and questionnaires to both youth and primary caregivers in the participant's language of preference. The measures were translated and back-translated using a method recommended by Kurtines & Szapocznik (1995). Because of the sensitive nature of some of the questions, the assessors completed the measures with the mothers and youths in separate areas to protect their confidentiality and to promote honest responses. All questions were read to the participants. More complete information about the design of these studies is available in Coatsworth et al. (2002), Coatsworth, Pantin, and Szapocznik (2002), and Pantin et al., (2003).

Measures

Both studies included comprehensive assessment batteries of questionnaires designed to assess multiple developmental processes within the youths' social ecology. This study used a subset of measures common to both studies and representative of functioning within the individual, family, and school levels. Prior analyses had demonstrated preliminary reliability and validity (i.e., content and construct) for these measures with a Hispanic sample (see Coatsworth et al., 2002).

Demographic Variables—Youth completed a brief demographics questionnaire that collected information about such things as grade, family composition, date of birth, place of birth, and years in the U.S.

Bicultural Involvement—A modified version of the Bicultural Involvement Questionnaire (Szapocznik et al., 1980) assessed youth involvement in Hispanic and American culture. Participants assess their comfort with Hispanic and Anglo-American language, food, media, and traditions to yield separate Americanism and Hispanicism subscales. The original measure contains 21 items in each subscale. For this study, one item reflecting preference for work was dropped, since few of the youth held jobs. Internal consistency reliability of the Americanism ($\alpha = .91$) and Hispanicism ($\alpha = .91$) scales were excellent.

Individual Adaptation

Externalizing behavior was indexed from mothers' report using three subscales of the Revised Behavior Problem Checklist (RBPC; Quay & Petersen, 1987): the Conduct Disorder scale measuring the youth's disruptive and disobedient behavior (22 items; $\alpha = .94$); the Socialized Aggression scale reflecting the youth's defiant behaviors with deviant peers (17 items; $\alpha = .86$); and the Attention Problems scale indicating the youth's distractibility and difficulty with concentration (16 items; $\alpha = .93$). Youth report of externalizing behavior was assessed using the Problem Behavior subscale from the Child Competence Scale (Coatsworth, 1992). This 5-item scale measures the extent to which youth misbehave in the classroom ($\alpha = .77$).

Internalizing was indexed by the RBPC scale of Anxiety-Withdrawal to measure parent report of youth's insecurity, anxiety, and self-consciousness (11 items; $\alpha = .89$). Adolescents' report of depression was measured with the Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weisman, Orvaschel, & Padian, 1980) (20 items; $\alpha = .86$).

Substance Use and *Substance Use Attitudes* were assessed with the National Youth Survey (Center for Substance Abuse Prevention, 1997). Youth report of whether they had ever used cigarettes, alcohol, or marijuana in their lifetime was summed into a Lifetime Substance Use composite. Scores ranged from 0–3, with most youth reporting no use of any substances (68%). Attitudes toward drug use were assessed using 4 items assessing youth's beliefs and attitudes about using drugs (sample item: "I will be happier if I use alcohol or drugs?" $\alpha = .73$).

Academic Competence and *Activity Involvement/Competence* were assessed using subscales of the Child Competence Scale (Coatsworth, 1992). The Academic competence scale is comprised of 5 items assessing youth's ability to do well on tests and get high grades in school ($\alpha = .86$). The Activity involvement scale includes 5 items reflecting the extent to which youth are actively engaged in extracurricular activities and the extent to which they do well in those activities ($\alpha = .83$).

Sociocultural Adaptation

Family functioning was indexed using three variables. Adolescent report of Family Support was gathered using a subscale of the Social Support Appraisals Scale (Dubow, & Ulman, 1989; 11 items; $\alpha = .86$). Family Conflict was assessed from parent and youth report using the 9-item conflict subscale of the Family Environment Scale (Moos & Moos, 1981; $\alpha = .90$). Behavior Control/Parental Monitoring was assessed using the strictness/supervision subscale of the Parenting Practices scale (Steinberg, Lamborn, Dornbusch, that assess limit setting (8 items; $\alpha = .72$) and three Youth Disclosure items written for this study to measure the extent to which youth were willing to disclose to their parents where they went when parents were not supervising them directly ($\alpha = .77$).

Peer Adaptation—Four scales assessed youth peer interactions and peer behaviors. The four-item Peer competence scale from the Child Competence Scale (Coatsworth, 1992) assesses the extent to which youth are liked by peers and have friends to play with/hang out with ($\alpha = .70$). Peer Support was assessed using 10 items from the Social Support Appraisals

Scale (Dubow, & Ulman, 1989; $\alpha = .81$). Peer Drug Use was assessed by asking youth to respond yes or no to whether any of their friends used alcohol, cigarettes, or marijuana (Center for Substance Abuse Prevention, 1997). Finally, Peer Antisocial Behavior was assessed by asking youth to report on how many of their friends, “none” to “almost all,” engaged in any of eight delinquent behaviors ($\alpha = .92$).

RESULTS

Classification of Acculturation Strategies

The study's first research aim was to test whether a person-centered analytic approach to the Hispanicism and Americanism subscales of the BIQ would produce patterns that approximated the four-group model proposed by Berry (1980) and Santisteban et al. (2001). To do so, we first recoded the Hispanicism and Americanism scores onto a 4-point scale representing: (1) Very Low, scores below 40; (2) Low, scores between 41 and 59; (3) High, scores between 60 and 79; and (4) Very High, scores above 80. These cut points were determined rationally and were based on the scaling of the BIQ measure, which uses 5-point Likert items. For example, to be classified as “Very Low,” a participant's total score on the scale had to be below 40, which corresponds to a mean item-level score of between 1.0 and 2.0. This means that persons endorsing items at that level are indicating that they are “not at all comfortable” speaking English or Spanish in a variety of contexts, do “not at all” enjoy American or Hispanic activities, and do “not at all” prefer Hispanic or American ways of life. “Low” scores correspond to a mean item-level score of between 2.0 and 3.0, and indicate, for example, that on average the people responding would want “language to be Spanish” less than “sometimes,” the descriptor for point 3, but more than “not at all.” “High” scores represent a mean item-level score of between 3.0 and 4.0 and indicate that for the same questions, the respondent would want it to be that way more than “sometimes,” but less than “all the time.” In contrast, participants whose scores were “Very High” indicated that they felt “very comfortable” speaking English or Spanish in a variety of contexts, enjoyed American or Hispanic activities “very much” and preferred Hispanic or American ways of life “all the time.”

Crosstabulations of the new Americanism and Hispanicism scores were conducted and analyzed to create bicultural classifications. Crosstabulations indicated that a large number of participants were clustered near the middle of the scales (e.g. “High” or “Low”, but not “Very High” or “Very Low”). These individuals had scores of either 2 or 3 on both the Americanism and Hispanicism scales, indicating only a moderate preference, or comfort with either culture. This procedure created five acculturation groups. Four of these appeared to be fair representations of the groups suggested in Berry's typology: Alienation, Separation/Withdrawal, Assimilation, and Bicultural/Integration. A fifth group consisted of those cases with middle level scores on both dimensions. We labeled them “Moderates.” As indicated in Table 1, the modal classification was in the Bicultural/Integration group (45.1%), with substantial proportions of youth in the Moderate group and the Assimilation group. Only 13 youth were classified in the Separation/Withdrawal group (4.1%), and one youth was classified in the Alienated/Marginalized group.

Demographic Differences Across Acculturation Groups

We conducted Analysis of Variance (ANOVA) and chi-square analyses to examine group differences on important demographic variables. Means and standard deviations, or percentages, for these variables are reported in Table 1. As expected, the acculturation groups were statistically different on mean levels of Hispanicism ($F(3,310) = 199.1, p < .000$) and Americanism ($F(3,310) = 173.6, p < .000$). Post hoc Bonferroni comparisons indicated that each group differed from all other groups on these two variables. The groups were also significantly different on the number of years spent in the U.S. ($F(3,310) = 5.2, p < .01$).

Assimilated youth had been in the U.S. longer than youth in the Moderate group. Similarly, youth born in the U.S. were more likely to be in the Assimilated group than any of the other groups. There was also a significant relationship between gender and acculturative style ($\chi^2(3, N = 314) = 24.2; p < .001$). Although girls comprised 68% of the overall sample, they accounted for a substantially higher percentage of the Withdrawal group, slightly higher proportions of the Bicultural and Moderate groups and substantially less of the Assimilated group. Assimilated and Bicultural youth reported greater comfort in English than the other two groups.

Individual and Sociocultural Adaptation Across Acculturation Groups

The study's second research aim was to compare acculturation groups on indicators of functioning across multiple ecodevelopmental domains. Because the probability of Type I error increases as more tests are performed (Ott & Longnecker, 2001), the current study used the Bonferroni correction. Because four one-way planned comparisons were specified, the experiment-wise error rate was set at .10 and the individual comparison error rate was then calculated to be $.10/4 = .025$. Prior analyses (McBride, 1999) indicated that the covariance matrices for common variables in these two data sets were comparable on all but four variables: age, family support, socioeconomic status (SES), and years in the U.S. The primary reasons for combining the two samples, however, was not for comparison, but to increase sample size and statistical power and to increase variability in the bicultural and adaptational variables, thereby reducing restriction of range problems and increasing the likelihood of observing hypothesized relationships. These analyses included number of years spent in the U.S., age, and income as covariates.¹ Because family support was a dependent variable it was not included as a control variable.

Table 2 presents means and standard deviations for the youth groups on pertinent variables and also presents the *F*-values and the significance levels for each contrast. Only variables with significant results on any of the contrasts are presented.

Hypothesis 1 proposed that youth who were classified in the "Assimilation" group would have poorer outcomes than youth who adopt any of the other styles. Thus, planned comparison 1 tested for differences between individuals in the Assimilated group and individuals from the Bicultural, Moderate, and Withdrawal groups combined. Results across all variables indicated two significant findings; youth in the Assimilated group reported significantly higher problem behavior scores and lower parental monitoring than all other participants.

Hypothesis 2 predicted that high levels of Hispanicism in youth are protective against the risk of an assimilative style. It was tested in contrast 2, a direct comparison of the Assimilation and Bicultural groups. Similar to contrast 1, results indicated that Assimilated youth showed more problem behaviors, and less parental monitoring.

Hypothesis 3 proposed that the combination of high Hispanicism and high Americanism (biculturalism) is protective for youth in general. Planned comparison 3 tested this hypothesis by comparing Bicultural individuals with all other groups combined. Results indicated that Bicultural youth reported significantly higher levels of academic competence, peer competence, and parental monitoring. A weaker finding that did not reach our conservative alpha level suggested that bicultural youth also reported more peer support.

¹We also conducted parallel analyses using Nativity (U.S.-born vs. foreign-born) as a factor in our ANOVA models. Results were comparable to those presented. Years in the U.S. and Nativity are strongly related in this data set, with years in the U.S. providing greater variability across individuals.

Hypothesis 4 proposed that strong involvement in one *or* the other culture is protective. This hypothesis was tested in planned comparison 4 that contrasted the combined groups of Assimilation plus Bicultural (high scores on either or both dimensions) to the combined group of Withdrawal plus Moderate (high scores on neither dimension). Youth from the Assimilated + Bicultural group demonstrated higher levels of peer competence and peer support, and also showed greater academic competence.

DISCUSSION

The primary goal of the study was to explain and demonstrate the utility of a person-centered approach to studying acculturation that we believe can advance both theory and methodology. First, we tested whether a person-centered, pattern approach to examining biculturalism using the BIQ with Hispanic youth from Miami would result in groups of individuals that approximated the four-class typology proposed in the literature (Berry, 1980; Santisteban et al., 2001). Second, we applied these patterns and an ecodevelopmental model (Szapocznik & Coatsworth, 1999) to illustrate the relations between acculturation patterns and broad indicators of psychological and sociocultural adaptation.

Patterns of Acculturation

Results from this study indicate that a person-centered approach can meaningfully characterize the patterns of scores across the two dimensions of the BIQ and may do so more fully than alternative methods. One important finding from this study is that the four-class typology that is commonly discussed in the acculturation literature might not fully represent the different patterns of acculturation styles. Three of the four types emerged, yet our analyses also indicated that a fair percentage of youth (27%) had “moderate” scores on both Hispanicism and Americanism dimensions and that these individuals could be meaningfully distinguished from individuals in other acculturation types. Compared to the assimilated and bicultural groups, youth in the moderate group showed significantly less academic competence, peer competence, and friend’s support and marginally higher levels of anxiety-withdrawal.

The emergence of the moderate group in our analyses with this data set is important for several additional reasons. First, the significance of this group of youth would not have been evident in variable-centered, and most person-centered approaches to analyzing biculturalism. For instance, if individual bicultural scores were calculated by subtracting Americanism and Hispanicism subscale scores, then the moderate group would actually appear to be more bicultural (closer to zero) than our bicultural group. Similarly, person-centered approaches that rely on median splits would have “masked” the existence of this group. Our method of classifying people into acculturation types adds considerable information over the high/low median splits and, as such, allows for more accurate classification of individuals and permits finer-grained groupings on the dimensions. In the absence of empirically derived cut-points, we attempted to avoid the disadvantages of using a median or mean cut-off by setting rational cut-points according to the possible response options on the scales. Results indicated that only one youth was classified in the Alienation/Marginalization (low Hispanicism and low Americanism) category. If median splits were used to create the classifications, one fourth of our sample would have been placed in that group. We believe that although the category of Alienation/Marginalization is theoretically meaningful, the probability of someone demonstrating low engagement in both their culture of origin and their host culture is very low. It may be that Alienation/Marginalization is more probable when a social structure of the culture of origin is absent and when members of the host culture do not accept or are openly antagonistic toward immigrants. Certainly this was not the case with Hispanics in Miami, where social forces are more accommodating.

Second, understanding this “moderate” acculturation pattern in relation to the other patterns may provide information about the longitudinal processes of acculturation. The moderate group’s pattern of scores on sociodemographic and sociocultural adaptation variables suggest to us that these youth may be “transitioning” to other acculturative groups (bicultural, assimilated). On average, these youth have been in the US for less time and have less comfort in English than Assimilated or Bicultural youth. As early adolescents who are entering a developmental period of self-examination and identity exploration, these youth may be observing and experiencing a multicultural society and relinquishing some of their strong ties to their family’s culture of origin, that is, they do not want everything to be “Hispanic all the time,” yet are not fully comfortable in the “American” aspects of their community. An alternative explanation for the existence of the moderate group is that youth are critically appraising both cultures and selecting aspects of each that best suit them. It may be that some youth simply have strong preferences for some aspects of Hispanic or American culture (e.g. music, celebrations), while simultaneously rejecting others (e.g. food, TV). Combining item-level scores into composite scales may produce moderate scores on both dimensions of Hispanicism and Americanism. Future studies that examine patterns of scores at the item level could further develop our understanding of this group’s characteristics.

Acculturation and Sociocultural Adaptation

The second aim of this study was to incorporate a broader ecodevelopmental model to examine how the person-oriented acculturation styles were related to adaptation in multiple ecological contexts. Results showed important relationships at the individual, family, and peer level. In general, the findings supported our four primary hypotheses, but not across all domains. Contrary to our hypothesis, Assimilated youth did not show poor adaptation in all domains. Although they did report higher problem behavior, they also appeared to be functioning relatively well in other domains. When coupled with bicultural youth as a means for indexing high levels of cultural involvement, Assimilated youth demonstrated significantly higher scores on peer competence and friends’ support than the youth in the moderate and withdrawn groups. Culturally involved youth appear to connect well with others socially. Strong peer connections can potentially have a positive effect on development or, as noted by other researchers, a negative effect in which deviance is reinforced (Granic & Dishion, 2003). More complete social network style analyses examining with whom youth are associating may yield important results to answer this question. Our results suggesting that the Assimilation style may have more differentiated relations with functioning across social contexts is consistent with results from two studies conducted by Birman that demonstrated differentiation between dimensions of acculturation (to host culture, to culture of origin) and different life domains for Hispanic adolescent girls (Birman, 1998) and for adolescent Soviet Jewish refugees (Birman et al., 2002).

We also hypothesized that biculturalism would be protective and that youth in that group would show a more adaptive pattern across the life domains. In general, the bicultural group demonstrated the most adaptive pattern across the social ecological outcomes. Bicultural youth showed more academic competence, and less problem behavior than other groups. They also appear to have more resources in the family domain, specifically parental monitoring. Here again, our results are consistent with other studies that show the bicultural style to be the most adaptive (Berry, 2003; Balls Organista et al., 2003; Szapocznik et al., 1980).

Caveats, Limitations, and Future Research

Several important caveats and limitations about acculturation research in general and the current study in particular warrant notice. Acculturation research is always conducted in a broad sociopolitical context of city, region, or nation, and at a given time in history, all of which may have considerable influence on acculturation processes and on the particular acculturative

styles evident in the study results (Berry, 1997). Within most regions the United States the dominant philosophy is one that demands assimilation and comparisons to other countries or regions that hold more multicultural views may not be warranted (Berry, 2003). We recognize that Miami, the location of this study, is a unique cultural context in that the dominant philosophy is generally one of inclusion and promotion of adaptation for Hispanic immigrants. This can operate in several important ways. First, Hispanic immigrants to Miami have opportunities to adopt any of the acculturative strategies that have been proposed. That is, individuals have easily available resources and opportunities to become more fully bicultural or opportunities to fully retain their culture of origin. For instance, established programs are available to assist individuals with integrating origin and host cultures (Szapocznik et al., 1986, Szapocznik et al., 1989). At the same time, recent immigrants can easily and effectively maintain a dominant Hispanic identity and way of life without learning to speak English or being forced to adapt to values and ways of life that are less consonant with theirs. Spanish language, food, music, television, print media are all readily available in Miami, and this context has less “cultural distance” from Hispanic families’ countries of origin than other United States cities. In this regard, the context of our study, like that of many other acculturation studies, is likely to constrain the generalizability of the results and readers are cautioned against applying the findings to other samples of Hispanic youth or regions of the United States.

Acculturation is a process that occurs over time, and therefore, our study’s cross-sectional design cannot address changes in acculturation status or how changes influence adaptation. Our understanding of how the BIQ can be used to document the process would be enhanced by careful longitudinal studies that could capitalize on new methods for modeling longitudinal change, such as Latent Class Analysis (Maldonado-Molina, Coatsworth, & Collins, 2003). To date, the limited evidence does not suggest a progression through a set sequence of acculturation strategies (Ho, 1995), rather, as a 1988 study by Kim has demonstrated, it seems to suggest that individuals explore different patterns over time and across different contexts and adopt those that are more satisfying (as cited in Berry, 1997). We believe that finer-grained models of acculturation that include more acculturation “types” might yield different results. These longitudinal studies would also be enhanced by careful attention to historical and contextual demands, since patterns of acculturation and their relations to adaptation are likely to differ as a function of an individual’s history and the context in which the individuals lives. For example, families from specific nationalities (e.g., Cubans in Miami) or those that have been in the United States for longer periods of time may have more social capital to use in their process of adaptation.

Our study’s participants have several notable sample-specific characteristics. For example, they were not selected to be fully representative of either U.S. or South Florida Hispanic adolescent groups. The sample contains youth from a number of distinct nationalities (e.g., Cuban, Nicaraguan, Puerto Rican), but these groups were not of sufficient size to provide the statistical power to conduct our analyses by nationality. An interesting question to be addressed in future studies with larger, or more homogeneous samples, is whether patterns of acculturation and their association with adaptation vary by specific Hispanic ethnic group. Similarly, our sample was 70% girls. Compared to boys they showed different probabilities of being in our acculturation patterns and may also show different patterns of psychological and sociocultural adaptation. Future studies might specifically address gender issues in the relations between acculturation styles and adaptation (Birman, 1998; González-Soldevilla, 2003).

Although demonstrating gender or nativity differences in acculturative styles may advance acculturation theory, addressing the critical issues of how acculturation experiences lead to psychological and sociocultural problems or well-being requires studies that extend beyond these variables to investigate more proximal social and psychological processes (Chun, Balls Organista, & Marín, 2003). One important reason we extended our investigation to broader

social spheres is that it might provide insight into the mechanisms by which acculturation behaviors lead to psychological problems or problem behavior. Our ecodevelopmental model proposes that patterns of social interactions in the mesosystems and the microsystems mediate the relationship between cultural forces and youth maladjustment (Szapocznik & Coatsworth, 1999). Understanding which social domains of functioning are related to acculturation styles is a first step in helping us posit plausible hypotheses of how differences in acculturation lead to specific developmental outcomes. For example, exposure to deviant peers is one of the strongest mediating paths toward adolescent deviance and substance use (Ary, Duncan, Duncan, & Hops, 1999) and a possible link between acculturation and problem behavior for immigrant youth. Likewise, family functioning and parenting practices may also mediate relations between acculturation and problem behavior (Santisteban et al., 2004).

In sum, despite the sample specific limitations inherent in the present study, it illustrates the utility a person-centered approach to studying acculturation types and their relations with broad indices of psychological and sociocultural adaptation. The study of acculturation has been dominated by multivariate models that examine how acculturation variables are related to variable indicators of adaptation. Person-centered approaches such as the one used in this study have been proposed as alternative analytic strategies that provide a more holistic view of the individual as a total, integrated system (Magnusson, 1998). Person-centered strategies may be used as complementary approaches to illuminate alternative acculturative types and help develop a fuller understanding of the acculturation process.

References

- Ary D, Duncan T, Duncan S, Hops H. Adolescent problem behavior: The influence of parents and peers. *Behaviour Research and Therapy* 1999;37(3):217–230. [PubMed: 10087640]
- Balls Organista, P., Organista, K., & Kurasaki, K. (2003). The relationship between acculturation and ethnic minority mental health. In K. Chun, P.B. Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 139–161). Washington, DC: American Psychological Association.
- Berry, J.W. (1980). Acculturation as varieties of adaptation. In A. Padilla (Ed.), *Acculturation: Theory, models, and findings* (pp. 9–25). Boulder, CO: Westview.
- Berry JW. Lead article: Immigration, acculturation, and adaptation. *Applied Psychology: An International Review* 1997;46(1):5–68.
- Berry, J.W. (2003). Conceptual approaches to acculturation. In K. Chun, P. Balls Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 17–37). Washington DC: American Psychological Association.
- Birman D. Biculturalism and perceived competence of Latino immigrant adolescents. *American Journal of Community Psychology* 1998;26(3):335–354. [PubMed: 9726112]
- Birman D, Trickett EJ, Vinokurov A. Acculturation and adaptation of soviet Jewish refugee adolescents: Predictors of adjustment across life domains. *American Journal of Community Psychology* 2002;30(5):585–607. [PubMed: 12188052]
- Burnam MA, Hough RL, Escobar JI, Karno M, Timbers DM, Telles CA. Six-month prevalence of specific psychiatric disorders among Mexican Americans and non-Hispanic whites in Los Angeles. *Archives of General Psychiatry* 1987;44:687–694. [PubMed: 3498452]
- Cairns, R.B., Bergman, L.R., & Kagan, J. (Eds.). (1998). *Methods and models for studying the individual*. Newbury Park, CA: Sage.
- Center for Substance Abuse Prevention. (1997). *National Youth Survey*. Unpublished measure. Washington, DC.
- Chun, K.M., Balls Organista, P., & Marin, G. (2003). *Acculturation: Advances in theory, measurement, and applied research*. Washington, DC: American Psychological Association Press.
- Coatsworth JD. Project Competence: A developmental approach to defining and assessing competence. *The Community Psychologist* 1992;26:19–21.

- Coatsworth JD, Pantin H, McBride CK, Briones E, Szapocznik J. Ecosystemic predictors of behavior problems in young Hispanic females. *Applied Developmental Science* 2002;6:126–143.
- Coatsworth JD, Pantin H, Szapocznik J. Familias Unidas: A family-centered ecodevelopmental intervention to reduce risk for conduct problems and substance use among Hispanic adolescents. *Clinical Child and Family Psychology Review* 2002;5:113–132. [PubMed: 12093012]
- Coatsworth, J.D., Szapocznik, J., Kurtines, W., & Santisteban, D.A. (1997). Culturally competent psychosocial interventions with antisocial problem behavior in Hispanic youth. In D.M. Stoff, J. Breiling, & J.D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 395–404). New York: Wiley.
- De la Rosa M, Vega R, Radisch M. The role of acculturation in the substance abuse behavior of African-American and Latino adolescents: Advances, issues, and recommendations. *Journal of Psychoactive Drugs* 2000;32(1):33–42. [PubMed: 10801066]
- Dubow EF, Ulman DG. Assessing social support in elementary school children: The survey of children's social support. *Journal of Clinical Child Psychology* 1989;14:112–118.
- Epstein JA, Dusenbury L, Botvin GJ, Diaz T. Language use and initiation of alcohol use among New York City Hispanic adolescents. *Journal of Child and Adolescent Substance Abuse* 1996;5:63–79.
- Gil AG, Wagner EF, Vega WA. Acculturation, familism and alcohol use among Latino adolescent males: Longitudinal relations. *Journal of Community Psychology* 2000;28:443–458.
- Gomez MJ, Fassinger RE. An initial model of Latina achievement: Acculturation, biculturalism, and achieving styles. *Journal of Counseling Psychology* 1994;41:205–215.
- González-Soldevilla, A.B. (2003). Acculturative context, family functioning, and adjustment in Hispanic adolescent girls. Unpublished doctoral dissertation, University of Miami, FL.
- Granic I, Dishion TJ. Deviant talk in adolescent friendships: A step toward measuring a pathogenic attractor process. *Social Development* 2003;12:314–334.
- Guzmán, B. (2001). *The Hispanic Population: Census 2000* (Brief C2KBR/01–3). Washington, DC: U.S. Census Bureau.
- Ho E. Chinese or New Zealander? Differential paths of adaptation of Chinese Adolescent immigrants in New Zealand. *New Zealand Population Review* 1995;21:27–49.
- Kaplan MS, Marks G. Adverse effects of acculturation: Psychological distress among Mexican American young adults. *Social Science Medicine* 1990;31:1313–1319. [PubMed: 2287960]
- Kim, U. (1988). Acculturation of Korean immigrants to Canada. Unpublished doctoral dissertation, Queen's University, Canada.
- Kurtines, W.M., & Szapocznik, J. (1995). Cultural competence in assessing Hispanic youths and families: Challenges in the assessment of treatment needs and treatment evaluation for Hispanic drug abusing adolescents. In E. Rahdert & D. Czechowicz (Eds.), *Adolescent drug abuse: Clinical assessment and therapeutic interventions* (NIDA monograph no. 156, pp. 172–189). Rockville, MD: National Institute on Drug Abuse.
- Magnusson, D. (1998). The logic and implications of a person approach. In R.B. Cairns, L.R. Bergman, & J. Kagan (Eds.), *Methods and models for studying the individual* (pp. 3–62). Newbury Park, CA: Sage.
- Magnusson, D. (2000). The individual as the organizing principle in psychological inquiry: A holistic approach. In L.R. Bergman, R.B. Cairns, L.-G. Nilsson, & L. Nystedt (Eds.), *Developmental science and the holistic approach* (pp. 11–30). Mahwah, NJ: Erlbaum.
- Maldonado-Molina, M., Coatsworth, J.D., & Collins, L. (2003). A latent class dynamic approach to acculturation. Implications for studying substance abuse patterns in Latino youth. Poster presentation at the annual meeting of the National Hispanic Science Network, Miami Beach, FL.
- Marín G, Gamba RJ. A measurement of acculturation in Hispanics: The Bidimensional Acculturation Scale for Hispanics (BAS). *Hispanic Journal of Behavioral Sciences* 1996;18:297–316.
- Marín G, Sabogal F, VanOss Marín B, Otero-Sabogal R, Pérez-Stable EJ. Development of a short acculturation scale for Hispanics. *Hispanic Journal of Behavioral Sciences* 1987;9:183–205.
- McBride, C.K. (1999). Individual, familial and contextual factors predicting situations of sexual possibility in Latina adolescents. Unpublished doctoral dissertation, University of Miami, Coral Gables, FL.
- Moos, R.H., & Moos, B.S. (1981). *Manual for the Family Environment Scale*. Palo Alto, CA: Consulting Psychologist Press.

- Ott, R.L., & Longnecker, M. (2001). Multiple comparisons, An introduction to statistical methods and data analysis (5th ed., pp. 438–440). Australia: Duxbury Thomson Learning.
- Pantin H, Coatsworth JD, Feaster DJ, Newman FL, Briones E, Prado G, Szapocznik J. Familias Unidas: The efficacy of an intervention to increase parental investment in Hispanic immigrant families. *Prevention Science* 2003;4:189–201. [PubMed: 12940469]
- Quay, H.C., & Peterson, D.R. (1987). Manual for the Revised Behavior Problem Checklist. Unpublished manuscript, Department of Psychology, University of Miami, Coral Gables, FL.
- Rogler, L.H., Malgady, R.G., & Rodriguez, O. (1989). Hispanics and mental health: A framework for research. Melbourne, FL: Krieger.
- Rogler LH, Cortés DE, Malgady RG. Acculturation and mental health status among Hispanics: Convergence and new directions for research. *American Psychologist* 1991;46:585–597. [PubMed: 1952420]
- Santisteban, D.A., Coatsworth, J.D., Briones, E., & Szapocznik, J. (2003). Investigating the role of acculturation, family values and parenting practices in Hispanic youth behavior problems. Submitted for publication.
- Santisteban, D.A., Muir-Malcolm, J.A., Mitrani, V.B., & Szapocznik, J. (2004). Integrating the study of ethnic culture and family intervention science. In H. Liddle, D. Santisteban, R. Levant, & J. Bray (Eds.), *Family psychology: Science-based interventions*. Washington, DC: American Psychological Association Press.
- Scopetta, M.A., & Allegre, C. (1975). Clinical issues in psychotherapy research with Latins. In the *Proceedings of the Second National Conference on Drug Abuse*. New York: National Association for the Prevention of Addiction to Narcotics.
- Searle W, Ward C. The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations* 1990;14:449–464.
- Steinberg L, Lamborn SD, Dornbush SM, Darling N. The impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development* 1992;63:1266–1281. [PubMed: 1446552]
- Suarez SA, Fowers BJ, Garwood CS, Szapocznik J. Biculturalism, differentness, loneliness, and alienation in Hispanic college students. *Hispanic Journal of Behavioral Sciences* 1997;19:489–505.
- Szapocznik, J., & Coatsworth, J.D. (1999). An ecodevelopmental framework for organizing risk and protection for drug abuse: A developmental model of risk and protection. In M. Glantz & C.R. Hartel (Eds.), *Drug abuse: Origins and interventions* (pp. 331–366). Washington, DC: American Psychological Association.
- Szapocznik, J., & Kurtines, W. (1979). Acculturation, biculturalism and adjustment among Cuban Americans. In A. Padilla (Ed.), *Psychological dimensions on the acculturation process: Theory, models and some new findings* (pp. 139–159). Boulder, CO: Westview.
- Szapocznik J, Kurtines W, Fernandez T. Biculturalism and adjustment among Hispanic youths. *International Journal of Intercultural Relations* 1980;4:353–375.
- Szapocznik J, Rio AT, Perez-Vidal A, Kurtines W, Hervis O, Santisteban D. Bicultural effectiveness training: An experimental test of an intervention modality for families experiencing intergenerational/intercultural conflict. *Hispanic Journal of Behavioral Sciences* 1986;8(4):303–30.
- Szapocznik J, Santisteban D, Rio AT, Perez-Vidal A. Family effectiveness training: An intervention to prevent drug abuse and problem behaviors in Hispanic adolescents. *Hispanic Journal of Behavioral Sciences* 1989;11(1):4–27.
- Szapocznik J, Scopetta MA, Kurtines W, Aranalde MA. Theory and measurement of acculturation. *Interamerican Journal of Psychology* 1978;12:113–130.
- Vega, W.A., & Gil, A.G. (1998). *Drug use and ethnicity in early adolescence*. New York: Plenum Press.
- Vega WA, Gil AG, Warheit GJ, Zimmerman RS, Apospori E. Acculturation and delinquent behavior among Cuban American adolescents: Toward an empirical model. *The American Journal of Community Psychology* 1993;21:113–125.
- Vega WA, Kolody B, Agilar-Gaxiola S, Alderete E, Catalano R, Caraveo-Anduaga J. Lifetime prevalence of DSM-III-R psychiatric disorders among urban and rural Mexican Americans in California. *Archives of General Psychiatry* 1998;55:771–782. [PubMed: 9736002]

- Ward, C. (1996). Acculturation. In D. Landis & R. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed., pp. 124–147). Newbury Park, CA: Sage.
- Weissman M, Orvaschel H, Padian N. Children's symptoms and social functioning: Self-report scales. *Journal of Nervous and Mental Disorders* 1980;168:736–740.
- Zane, N., & Mak, W. (2003). Major approaches to the measurement of acculturation among ethnic minority populations: A content analysis and an alternative empirical strategy. In K. Chun, P.B. Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 39–60). Washington, DC: American Psychological Association.

Table 1
Means and Standard Deviations or Percentages of Demographic Variables by Acculturation Group^a

<i>N (%)</i>	<i>Assimilation 74 (23.5%)</i>	<i>Bicultural 142 (45.1%)</i>	<i>Withdrawal 13 (4.1%)</i>	<i>Moderate 85 (27%)</i>
Hispanicism	46.1 (9.2)	77.9 (10.1)	90.0 (9.3)	66.9 (8.3)
Americanism	88.7 (6.2)	85.0 (8.8)	46.7 (7.7)	68.3 (8.8)
Years in US	9.28 (4.2)	7.88 (4.2)	6.44 (5.1)	6.69 (4.6)
U.S. born	64.9%	39.4%	15.4%	28.2%
Age	12.4 (.8)	12.5 (.9)	12.6 (1.1)	12.6 (.9)
Sex (% female)	45.9%	75.4%	92.3%	71.8%
Comfort in English	4.59 (.9)	4.65 (.8)	2.08 (1.4)	3.67 (1.5)
Household income	3.99 (2.2)	3.64 (2.1)	2.38 (1.0)	3.38 (2.0)

^a Alienation was deleted from the analyses due to small sample size ($n = 1$).

Table 2
Means and Standard Deviations for Youth Acculturation Groups With Results of Planned Contrast Tests

	Acculturation groups						Planned contrasts/Hypothesis tests				
	A (n = 74)	B (n = 142)	M (n = 85)	BWM (n = 240)	AWM (n = 172)	AB (n = 216)	WM (n = 98)	#1 A vs. BWM	#2 A vs. B	#3 B vs. AWM	#4 AB vs. WM
Individual Problem behavior	12.28 (4.59)	10.01 (4.83)	10.35 (4.68)	10.00 (4.81)	10.98 (4.84)	10.79 (4.86)	10.00 (4.81)	9.43** (p = .002)	8.99** (p = .003)	n.s.	n.s.
Anxiety/Withdrawal	1.69 (1.07)	3.24 (.893)	4.83 (1.01)	3.76 (.589)	3.40 (.696)	2.62 (.621)	4.71 (.927)	n.s.	n.s.	n.s.	n.s.
Academic competence	14.59 (.417)	15.47 (.298)	13.98 (.382)	14.97 (.229)	14.34 (.266)	15.23 (.240)	14.11 (.358)	n.s.	n.s.	8.99** (p = .003)	5.43** (p = .020)
Activity Competence	9.99 (3.99)	10.57 (5.03)	9.54 (4.15)	10.04 (4.73)	9.59 (4.08)	10.37 (4.70)	9.29 (4.15)	n.s.	n.s.	n.s.	n.s.
Family level Monitoring	4.23 (.804)	4.52 (.716)	4.27 (.792)	4.43 (.745)	4.27 (.783)	4.42 (.759)	4.29 (.770)	5.34** (p = .021)	9.09** (p = .003)	8.63** (p = .004)	n.s.
Behavioral control	.888 (.087)	.883 (.107)	.890 (.127)	.890 (.113)	.894 (.108)	.885 (.101)	.899 (.121)	n.s.	n.s.	n.s.	n.s.
Peer level Peer Competence	13.81 (2.18)	14.13 (2.27)	12.65 (2.58)	13.60 (2.46)	13.25 (2.42)	14.02 (2.24)	12.82 (2.52)	n.s.	n.s.	10.97** (p = .001)	17.17** (p = .000)
Friend's support	4.23 (.589)	4.28 (.569)	4.07 (.633)	4.19 (.624)	4.13 (.644)	4.26 (.575)	4.05 (.676)	n.s	n.s.	4.81 (p = .029)	7.47** (p = .007)

Note. Withdrawal (n = 13) was not included as an independent group. A = Assimilation; B = Bicultural/Integration; M = Moderate; BWM = Bicultural + Withdrawal + Moderate; AWM = Assimilation + Withdrawal + Moderate; AB = Assimilation + Bicultural; WM = Withdrawal + Moderate; # 1: A vs. BWM; #2: A vs. B; #3 B vs. AWM; #4: AB vs. WM.

Planned contrasts included years spent in the U.S., age of adolescent, and household income as covariates

p < 0.025