

# A Bidimensional Model of Acculturation for Examining Differences in Family Functioning and Behavior Problems in Hispanic Immigrant Adolescents

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This study examined the relationships of adolescent acculturation orientations to adolescent and parent reports of family functioning and behavior problems in a sample of 338 Hispanic families. Acculturation orientations are derived from the model proposed by Berry. Results indicate that integrated adolescents, who both maintain heritage culture practices and adopt receiving culture practices, reported the highest levels of parental involvement, positive parenting, and family support and that assimilated adolescents, who adopt receiving-culture practices and do not retain heritage culture practices, reported the greatest levels of aggressive behavior. Implications for intervention, as well as benefits of using a bidimensional model to evaluate the relationships of acculturation to individual and family functioning, are discussed.

**Keywords:** *acculturation; Hispanic; family functioning; behavior problems; immigrant families*

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Immigration has increasingly become a worldwide phenomenon, and immigrants are coming from (and settling in) a wider array of countries than ever before (van de Vijver & Phalet, 2004). As migration rates continue to increase around the world, the representation of immigrants in many countries has grown as well. In most cases, immigrants are faced with the task of adapting to their new receiving culture while choosing which aspects of their heritage culture they wish to retain. This process of adaptation has typically been referred to as acculturation (Gibson, 2001). Acculturation generally refers to the first (born outside the receiving country) and second (born in the receiving country but raised by foreign-born parents) generations of immigrants, because later generation descendants of immigrants generally integrate themselves into the receiving culture and do not acquire or retain many elements of the culture of origin.

Increasing migration rates have made the process of acculturation an increasingly important field of study (Chun, Organista, & Marín, 2003). Initially, acculturation was viewed as a unidimensional process in which immigrants were assumed to abandon the values and ideals of their country of origin and to adopt those of the new receiving culture (Redfield, Linton, & Hershkovits, 1936). However, given that globalization has helped immigrants to maintain contact with their cultures of origin (Phinney, Horenczyk, Liebkind, & Vedder, 2001; Rumbaut & Portes, 2001), acculturation has become more of a bidimensional process (Phinney, 2003; Ryder, Alden, & Paulhus, 2000). This bidimensional process includes both adoption of receiving-culture ideals (i.e., customs, values, and behaviors) and retention of culture-of-origin ideals. Within the bidimensional model, retention of culture-of-origin values and adoption of receiving-society values are considered as independent dimensions (Cabassa, 2003).

Several researchers have examined the benefit of conceptualizing the process of acculturation within a bidimensional framework (Berry, 2003; Marín & Marín, 1997; Rogler, Cortés, & Malgady, 1991; Szapocznik, Kurtines, & Fernandez, 1980). One of the most comprehensive and widely used bidimensional models of acculturation was developed by Berry (1980). Berry derived four acculturation orientations by crossing the two independent dimensions from the bidimensional approach: integrated (retains practices from the culture of origin and adopts practices of the receiving culture), separated (retains practices from the culture of origin but does not adopt practices of the receiving culture), assimilated (adopts practices of the receiving culture but does not retain practices of the culture of origin), and marginalized (neither retains practices from the culture of origin nor adopts practices of the receiving culture). Other researchers have derived similar categories

based on a bidimensional approach to acculturation (e.g., Bourhis, Moïse, Perreault, & Senécal, 1997; Coleman, 1995; Gibson, 1988; Szapocznik et al., 1980).

Acculturation orientations drawn from the bidimensional model have been examined in a wide range of receiving countries and immigrant groups (see Berry, Phinney, Sam, & Vedder, 2006). Research has revealed relationships between acculturation orientations and a number of personality and psychosocial factors. Specifically, research has indicated that the integrated acculturation strategy is more associated with indices of positive adaptation such as positive academic achievement orientations (Gomez & Fassinger, 1994), school adjustment (Coatsworth, Maldonado-Molina, Pantin, & Szapocznik, 2005), high self-worth (Birman, 1998), and higher levels of general well-being (Phinney, 1990) than other acculturation orientations. Assimilation has been associated with elevated rates of adolescent substance use (Epstein, Dusenbury, Botvin, & Diaz, 1996; Vega & Gil, 1998), conduct problems and delinquency in adolescence (Vega et al., 1993), and depression in adults (Kaplan & Marks, 1990; Moscicki, Locke, Rae, & Boyd, 1989). Marginalization has been associated with symptoms such as anxiety and depression (Berry & Sam, 1997; Neto, 2002) and with deviant behaviors such as delinquency and substance abuse (Berry, 2003). Separation has been associated with decreased likelihood of participation in delinquent activity (Buriel, Calzada, & Vasquez, 1982).

The present study examines the acculturation orientations in relation to family functioning and behavior problems in a sample of Hispanic immigrant adolescents living in Miami. Both family functioning and problem behaviors are integral constructs to examine because they are predictive of such negative outcomes as drug use (Dishion & Andrews, 1995; Tolan & Gorman-Smith, 1997) and unsafe sexual behavior (Christopherson, Miller, Fan, & Norton, 1998; Leland & Barth, 1993; Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000). The present study adds to the extant literature relating acculturation orientations to behavior problems, and it expands the correlates of the categories to include family functioning.

## **The Importance of Studying Acculturation in Hispanics**

Hispanics are an important population to study because they are the fastest growing minority and immigrant group in the United States. The United States Hispanic population grew by 58% during the 1990s, and as of 2003, Hispanics comprised 14% of United States population (Ramirez & de la Cruz, 2003). The majority of Hispanics in the United States either are foreign born themselves

or were raised by foreign-born parents (Marotta & Garcia, 2003). Hispanics are also a youthful population, with approximately one-third under the age of 18 (Ramirez & de la Cruz, 2003). Compared to non-Hispanic Whites, Hispanic adolescents tend to display elevated rates of academic failure (Greene & Forster, 2003), conduct problems (Snyder & Sickmund, 1999), and substance use (Centers for Disease Control and Prevention, 2002). Literature suggests that acculturation may have an important role in these adolescent outcomes (e.g., Coatsworth et al., 2005; Dinh, Roosa, Tein, & Lopez, 2002; Ford & Norris, 1993).

Literature further suggests that factors associated with acculturation may predispose Hispanic families to high conflict, communication difficulties, and decreased emphasis on the importance of family (e.g., Gil, Wagner, & Vega, 2000; Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987; Szapocznik et al., 1986). Moreover, several authors (e.g., Gonzales & Kim, 1997; Phinney, 1990; Rogler et al., 1991; Szapocznik & Kurtines, 1993) have suggested that challenges created by the acculturation experience may lead to behavior problems and other negative mental health outcomes in Hispanics. In many Hispanic families, parents, especially those who immigrate to ethnic enclaves as adults, may not adopt American cultural practices (Schwartz, Pantin, Sullivan, Prado, & Szapocznik, 2006). Whether family functioning is compromised, and whether adolescents from these families evidence problematic behavioral outcomes, may depend on the extent to which the adolescents retain the Hispanic cultural practices that their parents continue to endorse strongly (Martinez, 2006; Merali, 2004). Specifically, adolescents in the separated and bicultural categories, both of which are characterized by retention of heritage-culture practices, would be expected to report more favorable family functioning and lower levels of problematic behavior than would adolescents in the assimilated and marginalized categories.

Most research examining relationships of acculturation to family functioning, adolescent behavior problems, and their correlates (e.g., adolescent substance use and unsafe sexual behavior) in Hispanic immigrant families has been conducted using unidimensional models of acculturation that conceptualize adoption of American cultural practices and retention of Hispanic cultural practices as opposite ends of a continuum (e.g., Dinh et al., 2002; Rogler et al., 1991). Several of these studies have suggested that acculturation to American values and practices is related to problematic family functioning (Gil et al., 2000), behavior problems (Samaniego & Gonzales, 1999), adolescent substance use (Epstein, Botvin, & Diaz, 2001),

and unsafe sexual behavior (Ford & Norris, 1993). Because these studies have relied on unidimensional models of acculturation, however, it would appear that the extant research on the relationships of acculturation to family functioning and adolescent behavior problems in Hispanic populations does not reflect the most current thinking in the study of acculturation.

This last statement may need to be qualified to some extent, however. Unlike unidimensional models of acculturation, the bidimensional model does not carry the assumption that heritage-culture retention and receiving-culture acquisition are polar opposites. At the same time, however, empirical studies have often found that receiving-culture adoption and heritage-culture retention are correlated (i.e., not orthogonal), and proponents of unidimensional models of acculturation have argued that the descendants of immigrants, regardless of their heritage, eventually assimilate to the receiving culture (see Flannery, Reise, & Yu, 2001; Ryder, Alden, & Paulhus, 2000, for more thorough discussions of these issues). Although we use the bidimensional model in our study, it is not without its limitations.

Using a bidimensional model of acculturation may allow for further examination of the findings from unidimensional-model studies. For example, although research has indicated that acculturation to American values and practices is associated with behavior problems, it is not known whether this finding reflects the use of an assimilated or integrated acculturation strategy (both of which are characterized by high levels of acculturation to American values and practices). Using a bidimensional model of acculturation may therefore help to highlight which specific acculturation orientations may be associated with problematic family functioning and may represent risks for conduct problems in Hispanic immigrant adolescents. Such findings may then be used to design or adapt preventive interventions to address the specific acculturation challenges faced by Hispanic immigrant adolescents.

Two hypotheses were advanced for the present study. First, it was hypothesized that adolescents utilizing integrated or separated acculturation orientations would report significantly more adaptive family functioning than would adolescents utilizing marginalized or assimilated acculturation orientations. Second, it was hypothesized that adolescents utilizing integrated or separated acculturation orientations would report significantly fewer behavior problems than would adolescents utilizing marginalized or assimilated acculturation orientations. No differences were anticipated between the integrated and separated categories or between the marginalized and assimilated categories. Given the tendency for adolescent and parent reports of family functioning (Tein, Roosa, &

Michaels, 1994) and behavior problems (Achenbach, Dumenci, & Rescorla, 2002) to converge only modestly, we expected that adolescent acculturation orientation would relate to adolescent, but not parent, reports of family functioning and behavior problems.

## Method

### Participants

The present study used a community sample of 338 Hispanic immigrant parents (89% mothers, 9% fathers, 2% other) and their adolescents (170 females, 168 males). Participating parents and adolescents were enrolled in an adolescent drug use and sexual risk behavior prevention study. Data for the present analyses were taken from the baseline assessment for this larger study. This baseline assessment was conducted before participants were randomized to condition. The mean age of the parents was 43.21 years ( $SD = 6.62$ ), and the mean age of the adolescents was 12.8 years ( $SD = 0.72$ ). All participating parents in the study were foreign born. Primary countries of parental origin included Cuba (31.2%), Nicaragua (28.5%), Honduras (8.3%), Venezuela (6.5%), and other Central and South American and Caribbean countries (25.5%). Approximately half (50.3%) of the immigrant parents had been living in the United States for more than 10 years, 29.3% for between 3 and 10 years, and 20.1% for less than 3 years. The majority (60.7%) of adolescents were foreign born. The majority of immigrant adolescents were born in Cuba (24.3%), Nicaragua (15.4%), Honduras (4.7%), Colombia (2.4%), or other Central and South American and Caribbean countries (13.9%). Eighteen percent of foreign-born adolescents had been living in the United States for more than 10 years, 38% for between 3 and 10 years, and 43.9% for less than 3 years.

As per the inclusion criteria for the larger prevention study, all participating adolescents (a) were in the eighth grade, (b) attended one of the three participating middle schools in low-income areas of Miami, (c) had at least one parent who had been born in a Hispanic country, and (d) had never been hospitalized for psychiatric reasons. The adolescents and their parents were selected for inclusion in the larger trial because of risk factors inherent in the Hispanic immigrant experience and not because of identified behavior problems or substance use (see Pantin, Schwartz, Sullivan, Prado, & Szapocznik, 2004, for more information on participant selection). As a result, this was a selected rather than an indicated (clinical) sample.

## Measures

All measures and study procedures were approved by the University of Miami's Institutional Review Board and by the Miami-Dade County Public School Research Board. Acculturation reports were gathered from adolescents only, whereas family functioning and adolescent behavior problems reports were gathered from both adolescents and parents.

*Demographics.* Parents and adolescents completed a demographic form (parent version: 28 items, adolescent version: 8 items) on which they provided their date and country of birth, number of years living in the United States and South Florida, primary language spoken in the home, and ethnicity/race. Parents also reported on their marital and employment status, years of education completed, occupation, household income, and amount of government assistance received.

*Acculturation.* The Bicultural Involvement Questionnaire-Revised (Birman, 1998; Szapocznik et al., 1980) was used to assess adolescents' levels of orientation toward American (Americanism) and Hispanic (Hispanicism) culture. The Bicultural Involvement Questionnaire is one of the few bidimensional acculturation measures designed specifically for Hispanics (Zane & Mak, 2003). The Bicultural Involvement Questionnaire assesses Americanism and Hispanicism in terms of both (a) comfort with and enjoyment of American and Hispanic cultural practices (e.g., comfort and use of language, food, and traditions) and (b) how much participants would want or like to utilize American and Hispanic cultural practices. In this measure, 21 items assess Americanism and 21 items assess Hispanicism. However, because the majority of the adolescents in the sample were 13 years old, the two items assessing language use at work were dropped from the scoring algorithm, and as a result, 20 Americanism and 20 Hispanicism items were used in analysis. In the present sample, the Cronbach's  $\alpha$  coefficients for the Americanism and Hispanicism scores were .92 and .91, respectively.

*Family functioning.* Family functioning was assessed using four subscales: parental involvement, positive parenting, family support for the adolescent, and parent-adolescent communication. Each subscale was completed by both parents and adolescents. Parental involvement (adolescent report,  $\alpha = .81$ ; parent report,  $\alpha = .72$ ) and positive parenting (adolescent report,  $\alpha = .87$ ; parent report,  $\alpha = .67$ ) were assessed using the corresponding subscales from the Parenting Practices Measure (Thornberry, Huizinga, & Loeber, 1995), a 25-item

measure assessing various dimensions of parenting. Family support for the adolescent was assessed using the Family Support subscale (adolescent report,  $\alpha = .55$ ; parent report,  $\alpha = .49$ ) from the Family Relations Scale (Tolan, Gorman-Smith, Zelli, & Huesmann, 1997), a 25-item measure assessing indices of family functioning such as family cohesion, communication, and support. Family communication was assessed using the Parent-Adolescent Communication Scale (Barnes & Olson, 1985), a measure assessing the quality of parent-adolescent communication. The 20-item adolescent-report version of the measure assesses open family communication and problems in communication with the primary parent participating in the study (an additional 20 items assessing communication with the other parent were not used in analysis). The 20-item parent-report version assesses open family communication and problems in communication with the adolescent. A total communication score based on the sum of the open family communication and problems in family communication (reverse scored) was used as recommended by Barnes and Olson (1985). Cronbach's  $\alpha$  for the adolescent-reported total communication score was .88. Cronbach's  $\alpha$  for the parent report of total family communication was .84.

*Adolescent behavior problems.* Adolescent behavior problems were measured using both parent and adolescent reports. The Conduct Disorder ( $\alpha = .95$ ), Socialized Aggression ( $\alpha = .96$ ), and Attention Problems ( $\alpha = .93$ ) subscales from the parent-reported Revised Behavior Problem Checklist (Quay & Peterson, 1987; Rio, Quay, Santisteban, & Szapocznik, 1989) was used to assess parents' reports of their adolescents' behavior problems. Adolescents' reports of externalizing behavior problems were measured using shortened versions of the Aggressive Behavior ( $\alpha = .75$ ) and the Attention Problems ( $\alpha = .76$ ) subscales from the Youth Self-Report (Achenbach, 1991). Aggression/conduct problems and attention problems were used as indicators for adolescent behavior problems because they are common manifestations of externalizing behavior in early adolescence (Quay & Peterson, 1987; Rio et al., 1989).

## Procedures

In the present study, parents were interviewed by trained community assessors who read each question aloud to the parent and marked the answer on a hard copy of the measure. The adolescents were interviewed via an audio computer-assisted self-interviewing system (A-CASI; Resnick et al., 1997). The A-CASI method of administering the assessments to the

adolescents was utilized because it encourages more honest responding with regard to sensitive information (e.g., drug use and sexual behavior) gathered for the larger study (Newman et al., 2002). Each questionnaire item, along with the response scale, is read to the adolescent through a set of headphones while the adolescent sits in front of a laptop computer screen. The adolescent indicates her or his response by entering the appropriate response on the laptop (using either the keyboard or the mouse), after which the system proceeds to the next questionnaire item.

The measures used for analyses in this study were part of a larger assessment battery administered as part of the larger prevention intervention trial. The assessment battery was available in both English and Spanish, such that parents and adolescents could complete the assessment in their preferred language. Spanish translations of all measures were created using back translation and committee resolution of discrepancies between the original and back-translated versions (cf. Kurtines & Szapocznik, 1995). On average, parents took 1.5 hours to complete the parent battery, and adolescents took 2 hours to complete the adolescent battery. Each participating family was compensated \$50.

## Results

### Data Analytic Strategy

The analytic plan consisted of three steps. The first step was to classify participants into acculturation orientation categories. We categorized participants into acculturation orientation categories based on the range of possible scores on the Americanism and Hispanicism scales. Because each scale, with the work items deleted, consisted of 20 items responded to on a 1–5 scale, possible scores for each subscale range from 20 (a response of 1 to all items) to 100 (a response of 5 to all items), with a midpoint of 60 (a response of 3 to all items). “Low” scores would therefore range from 20 through 60, and “high” scores would range from 61 through 100. However, as is the case in other  $2 \times 2$  classification schemes, measurement error may create ambiguity regarding participants who score near the midpoint on both dimensions (cf. Jones, Akers, & White, 1994, for an example from another classification scheme). A common solution to this issue is to create a fifth category for participants who score near the midpoint on both dimensions. Coatsworth et al. (2005), for example, have done this using Berry’s acculturation orientations. We adopt a similar approach in the present

study: On both the Hispanicism and Americanism dimensions, scores between 20 and 60 are considered low, and scores between 61 and 100 are considered high. However, participants scoring between 55 and 65 on both dimensions were classified into a “moderate” category. A total of 323 participants provided data on the Hispanicism and Americanism scales and were classified into one of the groups. We created four acculturation orientation groups: (a) integrated (high Hispanicism and high Americanism,  $n = 216$ ), (b) separated (high Hispanicism and low Americanism,  $n = 32$ ), (c) assimilated (low Hispanicism and high Americanism,  $n = 78$ ), and (d) moderate ( $n = 10$ ). Two participants were classified into the marginalized category, but because this category was too small to analyze, these participants were not included in further analyses.

The second step was to conduct a manipulation check to confirm that Americanism and Hispanicism scores differed as would be expected among the four acculturation orientations. A multivariate analysis of variance (MANOVA) was conducted on the Americanism and Hispanicism scores by acculturation strategy, with Tukey’s least significant difference post hoc tests conducted to explore significant univariate effects. The third step was to determine whether family functioning and adolescent behavior problems differed significantly by acculturation strategy. Because family functioning and adolescent behavior problems represent separate hypotheses, a separate MANOVA was conducted on the variables within each of these sets. Within each MANOVA, Tukey’s least significant difference post hoc tests were conducted to explore significant univariate effects.

## Descriptive Statistics

Demographic characteristics of the sample are displayed in Table 1, and descriptive statistics and internal consistency estimates for all study variables are displayed in Table 2. Because both United States-born and foreign-born adolescents were well represented in the sample, we examined whether these background attributes were significantly related to adolescent acculturation orientation. Adolescent nativity was significantly related to acculturation orientation,  $\chi^2(3, N = 336) = 29.23, p < .001, \phi = .30$ . Foreign-born adolescents were more likely than United States-born adolescents to be classified as separated (15% versus 2%) or moderate (4% versus 1%), whereas United States-born adolescents were more likely than foreign-born adolescents to be classified as assimilated (34% versus 16%). United States-born and foreign-born adolescents were equally likely to be classified as integrated (64% and 65%).

**Table 1**  
**Sample Demographics, Descriptive Statistics,**  
**and Reliability Coefficients**

Variable	Mean	<i>SD</i>	Percentage
Demographics			
Adolescent age	12.84	0.72	
Adolescent gender			
Male			49.7
Female			50.3
Adolescent nativity			
United States born			39.3
Foreign born			60.7
Parent years in United States			
Less than 3			20.1
3–10			29.3
More than 10			50.3
Adolescent years in United States <sup>a</sup>			
Less than 3			43.9
3–10			38.0
More than 10			18.0
Familial country of origin			
Cuba			31.2
Nicaragua			28.5
Honduras			8.3
Venezuela			6.5
Other			25.5

a. For immigrant adolescents only.

## Comparison of the Acculturation Orientations on Hispanicism and Americanism

To confirm that the acculturation orientation categories were created correctly, we conducted a MANOVA on the Americanism and Hispanicism subscales by acculturation category. As would be expected, the multivariate results were highly significant, Wilks'  $\lambda = .21$ ,  $F(6, 662) = 129.78$ ,  $p < .001$ ,  $\eta^2 = .54$ . Because the assumption of homogeneity of variance was violated for both Americanism, Levene's  $F(3, 332) = 6.02$ ,  $p < .002$ , and Hispanicism, Levene's  $F(3, 332) = 4.89$ ,  $p < .003$ , we used the Welch corrected  $F$  statistic to analyze and report univariate effects. This statistic adjusts the  $F$  value and the denominator degrees of freedom to account for heterogeneity of variance across groups (Luh & Guo, 1999). Univariate results indicated that both Hispanicism,  $F(3, 44) = 181.91$ ,  $p < .001$ ,  $\eta^2 = .58$ , and Americanism,  $F(3, 47) = 247.84$ ,  $p < .001$ ,  $\eta^2 = .50$ , differed significantly by acculturation

**Table 2**  
**Descriptive Statistics and Reliability Coefficients for**  
**Study Variables**

Variable	Mean	<i>SD</i>	Cronbach's $\alpha$
Acculturation			
Americanism	74.54	14.65	.92
Hispanicism	70.80	13.10	.91
Family functioning			
Communication (A)	73.28	14.19	.88
Involvement (A)	45.08	9.08	.81
Positive parenting (A)	22.69	5.35	.87
Support (A)	15.91	3.41	.55
Communication (P)	76.92	9.05	.84
Involvement (P)	52.23	6.63	.72
Positive parenting (P)	34.29	4.77	.67
Support (P)	11.02	2.72	.49
Behavior problems			
Aggressive behavior (A)	5.32	3.62	.75
Attention problems (A)	4.04	3.15	.76
Conduct disorder (P)	6.04	7.94	.95
Socialized aggression (P)	1.96	5.61	.96
Attention problems (P)	4.79	6.20	.93

category. As would be expected, Tukey's least significant difference post hoc tests, with all pairwise differences significant at  $p < .05$ , indicated that mean Hispanicism levels were lowest in the assimilated category, highest in the separated and integrated categories (which were significantly different from one another), and intermediate in the moderate category (see Table 3). With regard to Americanism, as expected, with all pairwise differences significant at  $p < .05$ , mean Americanism scores were highest in the assimilated and integrated categories (which were significantly different from one another), lowest in the separation category, and intermediate in the moderate category.

### Comparison of the Acculturation Orientations on Family Functioning and Behavior Problems

*Family functioning.* A MANOVA including the four adolescent-reported family functioning subscales and the four parent-reported family functioning subscales produced a significant multivariate effect, Wilks'  $\lambda = .84$ ,  $F(24, 720) = 7.49$ ,  $p < .01$ ,  $\eta^2 = .06$ . The assumption of heterogeneity of

**Table 3**  
**Pairwise Comparisons by Acculturation Orientation**

Variable	Acculturation Orientation				F Ratio	$\eta^2$
	Assimilated	Separated	Integrated	Moderate		
Acculturation						
Hispanicism <sup>a</sup>	51.30 <sub>a</sub> (7.77)	79.59 <sub>b</sub> (10.60)	75.23 <sub>b</sub> (9.20)	61.46 <sub>d</sub> (3.44)	181.91 <sup>***</sup>	.58
Americanism <sup>a</sup>	87.70 <sub>a</sub> (9.79)	51.04 <sub>b</sub> (7.08)	81.89 <sub>c</sub> (10.01)	60.86 <sub>d</sub> (3.48)	247.84 <sup>***</sup>	.54
Family functioning						
Communication (A)	68.49 <sub>a</sub> (14.37)	74.05 <sub>ab</sub> (12.33)	73.76 <sub>b</sub> (14.35)	65.00 <sub>c</sub> (18.62)	2.85 <sup>*</sup>	.03
Involvement (A)	43.82 <sub>a</sub> (8.42)	45.23 <sub>ab</sub> (9.63)	48.00 <sub>b</sub> (7.85)	41.93 <sub>c</sub> (13.90)	5.04 <sup>**</sup>	.05
Positive parenting (A)	21.03 <sub>a</sub> (5.74)	20.90 <sub>a</sub> (4.88)	23.81 <sub>b</sub> (4.76)	20.33 <sub>ab</sub> (5.68)	6.58 <sup>**</sup>	.07
Support (A)	16.10 <sub>ab</sub> (3.53)	14.95 <sub>a</sub> (3.37)	16.76 <sub>b</sub> (3.54)	13.85 <sub>a</sub> (2.48)	3.05 <sup>*</sup>	.03
Communication (P)	75.52 (7.67)	75.53 (9.00)	77.97 (9.00)	78.00 (8.29)	1.55	.02
Involvement (P)	52.10 (6.00)	52.32 (6.20)	53.00 (5.91)	51.50 (4.55)	0.24	.00
Positive parenting (P)	32.37 (5.87)	34.79 (4.74)	35.12 (4.28)	36.57 (4.06)	2.34	.03
Support (P)	10.96 (2.70)	11.10 (2.81)	11.01 (2.79)	10.33 (2.25)	0.07	.00
Behavior problems						
Aggressive behavior (A) <sup>a</sup>	7.40 <sub>a</sub> (4.58)	4.69 <sub>ab</sub> (2.61)	5.47 <sub>b</sub> (3.82)	3.70 <sub>b</sub> (2.31)	6.76 <sup>**</sup>	.06
Attention problems (A)	5.23 <sub>a</sub> (3.47)	3.91 <sub>ab</sub> (2.82)	4.20 <sub>b</sub> (3.39)	4.10 <sub>b</sub> (2.47)	2.03	.02
Conduct disorder (P)	5.36 (5.88)	6.98 (9.13)	5.53 (7.47)	6.47 (8.60)	0.45	.00
Socialized aggression (P) <sup>a</sup>	0.99 (2.63)	2.85 (8.17)	1.61 (4.86)	3.10 (8.77)	0.73	.01
Attention problems (P)	4.78 (5.16)	5.94 (6.14)	4.15 (5.63)	5.10 (8.17)	1.05	.01

Note: Within each row, means with the same subscripts are not significantly different from one another.

a. The assumption of homogeneity of variance was not met. As a result, the Welch corrected *F* statistic is reported (cf. Luh & Guo, 1999).

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

variance was met for all of the dependent variables in this analysis. Significant univariate results emerged for adolescent reports of all four family processes: parent–adolescent communication,  $F(3, 265) = 2.05, p < .04, \eta^2 = .03$ ; parental involvement,  $F(3, 265) = 5.04, p < .005, \eta^2 = .05$ ; positive parenting,  $F(3, 265) = 6.58, p < .001, \eta^2 = .07$ ; and family support,  $F(3, 265) = 3.05, p < .03, \eta^2 = .03$ . Tukey's least significant difference post hoc tests indicated that integrated adolescents reported significantly higher levels of parent–adolescent communication, parental involvement, and positive parenting than did assimilated adolescents and that integrated adolescents reported significantly higher levels of family support than did adolescents in the assimilated and moderate orientation categories (see Table 3). None of the parent-reported subscales differed significantly by adolescent acculturation orientation.<sup>1</sup>

Because acculturation orientations differed significantly by adolescent nativity (i.e., United States born versus foreign born), we reconducted the analysis controlling for adolescent nativity. Neither the main effect of adolescent nativity nor the Acculturation Strategy  $\times$  Adolescent Nativity interaction was statistically significant. We also examined years in the United States as a covariate for foreign-born adolescents. The effects of this covariate were not statistically significant.

*Adolescent behavior problems.* A MANOVA conducted on the adolescent- and parent-reported behavior problems subscales by adolescent acculturation orientation produced a significant multivariate effect, Wilks'  $\lambda = .90, F(15, 853) = 2.18, p < .01, \eta^2 = .03$ . The assumption of heterogeneity of variance was violated for adolescent-reported aggressive behavior, Levene's  $F(3, 182) = 4.22, p < .01$ , and for socialized aggression, Levene's  $F(3, 182) = 3.08, p < .03$ . As a result, the Welch's corrected  $F$  statistic was used for these dependent variables, whereas the regular univariate  $F$  statistic was used for the other dependent variables. The only significant univariate effect was for adolescent-reported aggressive behavior,  $F(3, 34) = 3.01, p < .05, \eta^2 = .06$ . Tukey's least significant difference post hoc tests indicated that assimilated adolescents reported significantly more behavior problems than did adolescents utilizing other acculturation orientations (see Table 3).

Again, we reconducted the MANOVA controlling for adolescent nativity. Neither the main effect of adolescent nativity nor the Acculturation Orientation  $\times$  Adolescent Nativity interaction was statistically significant. Furthermore, for foreign-born adolescents, length of residence in the United States was not significant as a covariate.

## Discussion

The purpose of the present study was to examine the relationship of self-reported adolescent acculturation to parent and adolescent reports of family functioning and behavior problems in Hispanic adolescents from immigrant families. The present study utilized a bidimensional understanding of acculturation rather than the unidimensional understandings used in most previous research on this topic. The bidimensional model may be most appropriate in a bicultural context, such as Miami, where both heritage-culture retention and receiving-culture acquisition are highly encouraged (cf. Bourhis et al., 1997; Flannery et al., 2001). It must be kept in mind that the concept of acculturation, when discussed in reference to immigrants, refers primarily to first- and second-generation immigrants. Later descendants of immigrants, in most cases, acculturate to the receiving society and do not retain many elements from the heritage culture.

The results of the present study illustrate that orientations toward American and Hispanic cultural practices interact (in the form of acculturation orientations) in their relationship to family functioning and to the adolescent's behavior problems. It is worth noting, however, that the acculturation categories emerging from a classification system based on the scaling of the acculturation measure (and not on median splits) were somewhat different from those proposed by Berry (1980, 1997). Consistent with Berry's model, the assimilated, separated, and integrated categories were represented in our data. However, no marginalized group emerged, and a small group of adolescents scored near the midpoints on both Americanism and Hispanicism. Following Coatsworth et al. (2005), we classified these adolescents into a "moderate" category. Otherwise, these adolescents' closeness to the midpoint on both scales may have created undetectable errors in category assignment, such that even small amounts of measurement error could result in their assignment to an "incorrect" category.

The absence of a marginalized category is consistent with Rudmin (2003), who has contended that marginalization is infeasible as an acculturation orientation. Specifically, if a person does not adopt the practices of either the heritage or receiving cultures, then where do the person's linguistic preferences, cultural attitudes, and beliefs come from? The absence of a marginalized group is also consistent with the cultural context of Miami, where young people are encouraged both to retain Hispanic cultural values and practices *and* to adopt American cultural values and practices (cf. Schwartz et al., 2006). The likelihood that a Hispanic adolescent in

Miami would neither retain Hispanic cultural values and practices nor adopt American cultures and practices may therefore be even smaller than the corresponding probability in a more monocultural context.

Although previous research using unidimensional models of acculturation has identified acculturation to American cultural practices as a risk factor for behavior problems (Epstein et al., 1996; Vega & Gil, 1998; Vega, Gil, Warheit, Zimmerman, & Apospori, 1993), the present results support a refinement of this conclusion. Specifically, among Hispanic immigrant adolescents, orientation to American culture may be problematic only when it is not coupled with retention of Hispanic cultural practices. Moreover, adopting American cultural practices while retaining Hispanic cultural practices may be associated with the most favorable reports of parental involvement, positive parenting, and family support. This is consistent with the literature that has demonstrated that (a) adoption of American cultural practices without retaining the practices of one's heritage culture is associated with negative adjustment outcomes, and (b) adoption of American cultural practices while retaining heritage-culture practices is associated with positive adjustment outcomes (cf. Szapocznik et al., 1980).

The present findings exemplify the importance of considering acculturation, and the acculturation orientations model in particular, as a bidimensional process. The acculturation orientation categories were differentially associated with family functioning and adolescent behavior problems despite the relatively monocultural neighborhoods from which the present participants were recruited and despite the high Americanism scores that characterized most of the sample. That the acculturation orientations were systematically associated with adolescent and family functioning in theoretically consistent ways despite these sampling limitations speaks to the usefulness and robustness of the acculturation orientations model.

The finding that integrated adolescents reported the most favorable levels of parental involvement, positive parenting, and support is consistent with the hypothesis that youth who are most comfortable with both their heritage and receiving cultural contexts are most likely to relate well to their families. Biculturalism, which represents the endorsement of both heritage and receiving cultures and corresponds to integration within Berry's model, appears to be "greater than the sum of its parts"—a condition separate from endorsement of either of the component cultures (Schwartz, Zamboanga, Rodriguez, & Wang, 2007). Bicultural individuals are often able to "switch sets," behaving and thinking in ways consistent with the heritage culture at home but behaving and thinking in ways consistent with the receiving

culture while at school or with friends (Tadmor & Tetlock, 2006). It is therefore not surprising that bicultural adolescents report the most favorable perceptions of their families.

The higher levels of aggressive behavior reported by assimilated adolescents are consistent with research using both unidimensional (Dinh et al., 2002) and bidimensional (Coatsworth et al., 2005) models of acculturation. Given that assimilated adolescents were not significantly lower on family functioning indicators than were separated and moderate adolescents, family functioning may not be the mechanism by which acculturation orientation is related to aggressive behavior. Assimilated adolescents, who adopt American cultural practices while rejecting Hispanic cultural practices, may gravitate toward Americanized peers who socialize them toward behavior problems (Pantin, Schwartz, Sullivan, Coatsworth, & Szapocznik, 2003).

It is also important to note that adolescent acculturation orientation was related to adolescent-reported, but not parent-reported, family functioning and behavior problems. This finding is consistent with our expectations and with other studies we have conducted (e.g., Schwartz et al., 2007; Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2005) in which adolescent intrapersonal variables were related only to adolescent reports of family functioning and behavior problems. Given the moderate levels of convergence between adolescent and parent reports of family functioning (Tein et al., 1994) and behavior problems (Achenbach et al., 2002), it would be difficult for another variable to relate closely to both parent and adolescent reports of these phenomena. It is possible that including parent as well as adolescent acculturation orientations might elucidate relationships with parent reports of family functioning and of adolescent behavior problems.

Although the extent of problem behavior and problematic family functioning reported by adolescents in the present sample was fairly mild, it should be noted that many of the adolescents with whom Szapocznik and colleagues (Szapocznik, Santisteban, Kurtines, Perez-Vidal, & Hervis, 1984; Szapocznik et al., 1986; Szapocznik et al., 1989) worked in their clinical research studies were generally older than were the adolescents in the present sample. The relationship of assimilation to aggressive behavior may suggest that the assimilated adolescents in the present sample might progress to more severe behavior problems if their acculturation orientation is not modified. It is for this reason that we include a section on implications for intervention.

## Implications for Intervention

The present results may have important implications for intervention. Assimilated adolescents reported the highest level of behavior problems, and integrated adolescents reported the most favorable family functioning on three of the four indices we assessed. Applied to Hispanic adolescents, Berry's concept of assimilation corresponds to the concept of "premature Americanism" (Rumbaut & Portes, 2001), in which immigrant adolescents become Americanized and discard the values and practices of their heritage culture. On the other hand, biculturalism (integration) refers to adopting American values and practices while still holding on to Hispanic values and practices. As a result, intervention efforts directed toward assimilated adolescents might focus on restoring the adolescent's orientation toward heritage-culture (in this case, Hispanic) values and practices (cf. Szapocznik et al., 1986). Such interventions would aim to convert assimilation into integration, which appears to be associated with the most adaptive family functioning (at least as perceived by the adolescent).

Because improving family functioning may best be accomplished systematically (e.g., Szapocznik & Kurtines, 1989), interventions to correct premature Americanism and its correlates might best be implemented in a whole-family context. Promoting biculturalism in both Hispanic immigrant adolescents and their parents has been shown to be efficacious in improving family functioning and in reducing adolescent behavior problems (Szapocznik et al., 1986, 1989). In the programs through which such efficacy has been demonstrated, intervention strategies that have been implemented include helping parents and adolescents to understand each other's cultural orientations, and each other (Szapocznik et al., 1984), by reframing intergenerational difficulties as culturally based disagreements (Szapocznik et al., 1989). Such reframes help to uncouple intergenerational conflicts from intercultural conflicts and therefore to reduce discord between Hispanic immigrant parents and adolescents. The reframes also may create opportunities to shift the blame for parent-adolescent discord from the parties involved to an external entity (i.e., the culture), thereby opening the opportunity for more open discussion between parents and their adolescents.

## Limitations and Suggestions for Further Research

The present results should be considered in light of several limitations. First, the sample for the present study was recruited from a monocultural neighborhood in Miami (Little Havana). Miami is the only major United

States city where a minority group (individuals of Cuban descent) holds the majority of political and economic power (Croucher, 2002). The socio-political context of a given city, region, or nation may substantially influence the process of acculturation and the mechanisms by which this process is undertaken (Bourhis et al., 1997). The acculturation patterns observed in other United States cities may therefore be different from that observed in Miami. As a result, care should be taken in generalizing the present results to other communities.

Second, it is important to note that the majority of Americanism scores were above the scale midpoint. Although 60.7% of the adolescents in the present sample were immigrants, approximately half of the sample had resided in the United States for at least 10 years. Consequently, recent immigrant adolescents (whose Americanism scores would likely have been lower) were not well represented in the sample. Perhaps as a result, the moderate and separated acculturation orientations were characterized by small cell sizes (10 and 30, respectively). Although the goal of the present study was not to examine recent immigrants or experiences related to immigration, it must be acknowledged that the present sample is weighted toward nonrecent immigrants.

Third, the use of a cross-sectional design does not permit conclusions to be drawn about direction of effects. For example, although it might be assumed that adolescent acculturation affects family functioning, it is also possible that Hispanic immigrant families who function well monitor their adolescents and discourage them from associating with Americanized peers. Also, in well-functioning families adolescents are likely to be bonded to their parents, and this may result in their maintaining their family's culture-of-origin values. Longitudinal studies are necessary to determine the direction in which the relationships obtained in the present study operate.

Finally, it may be useful for future studies to consider parents' as well as adolescents' acculturation orientations. Some research (e.g., Santisteban, Coatsworth, Briones, & Szapocznik, 2006) has found that parents' retention of Hispanic cultural practices is protective against deteriorations in family functioning and against adolescent behavior problems. In the present study, we found relationships of adolescent acculturation orientation only to adolescent reports of family functioning and of behavior problems. A broader systemic view of acculturation and family processes might hold that the viability of the adolescent's acculturation orientation is dependent on the degree of match with the parent's acculturation orientation (e.g., Szapocznik & Kurtines, 1980, 1993). For example, an assimilated adolescent may be less likely to

experience conflicts with an assimilated parent than with a separated parent (in which case the adolescent's and parent's acculturation orientations are diametrically opposed), and in turn the adolescent's level of behavior problems would depend not only on the adolescent's acculturation orientation but also on the *interaction* between adolescent and parent acculturation orientations.

Despite these limitations, the present study has extended the knowledge base concerning the relationships of acculturation to adolescent and family functioning. For example, previous research using unidimensional models of acculturation has suggested the conclusion that acculturation to American values and practices is associated with problematic outcomes. The present findings suggest that this conclusion should be qualified, in that high levels of Americanism are not problematic as long as they are coupled with retention of Hispanic values and practices. The study also reaffirms the importance of biculturalism vis-à-vis family functioning. The present study also supports the use of the acculturation orientations model with Hispanic immigrant adolescents. It remains for further research to replicate the present findings with Hispanic immigrant adolescents in other regions of the United States and from national backgrounds not well represented in the present sample.

## Note

1. Because there was a substantial amount of missing data on parent-reported involvement and positive parenting, we reconducted the analysis without these subscales to ascertain whether the results would be consistent when cases with missing data on these subscales were included. Results were highly consistent with those reported here.

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