

Acculturative Stress Among Cuban American College Students: Exploring the Mediating Pathways Between Acculturation and Psychosocial Functioning¹

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We examined different dimensions of acculturative stress in mediating the association between acculturation and psychosocial functioning among 199 Cuban American college students (*M* age = 20.1 years) in Miami. Results showed that heritage-cultural orientation was directly associated with self-esteem. No other direct relations emerged. Spanish competency pressures and pressures against acculturation mediated the relationships between heritage-cultural orientation and internalizing symptoms, whereas pressures to acculturate mediated the association between American cultural orientation and self-esteem. These findings highlight the unique roles of different components of acculturative stress in the relationship of heritage and American cultural orientation to Cuban American adolescents' psychosocial well-being. Implications regarding the multidimensionality of acculturation and of acculturative stress are discussed.

The U.S. Hispanic population is growing at an unprecedented rate. Through both immigration and childbearing, Hispanics have been responsible for 50% of all U.S. population growth since 2000 (Bernstein, 2007), particularly the growth of the child, adolescent, and young adult populations (Ramos, 2002). Within the past two decades, the growth of the Hispanic population has generated much attention from researchers, policymakers, and mental-health practitioners in order to understand better the processes of cultural adaptation, to promote positive health outcomes, and to prevent negative outcomes. A large body of literature has followed from the premise

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that there is a need to integrate social and cultural considerations into Latino health.

Hispanics are (or are becoming) one of the largest minority groups in many American cities. Miami, for example, was developed largely by Cuban immigrants who arrived around the time of the Castro Revolution (Stepick & Stepick, 2002). The population of Miami is approximately 60% Hispanic, with Cuban-descent individuals constituting the largest Hispanic subgroup and comprising nearly half of all Hispanics in southern Florida. Florida International University, the state university located in Miami, serves a largely Hispanic (and largely Cuban-descent) student population. The predominance of Hispanics at this university is not completely an artifact of its location in Miami: In 2000, 22% of all university students in the United States were Hispanic (Llagas & Snyder, 2003), even though Hispanics accounted for only 14% of the total U.S. population at that time.

Because the majority of U.S. Hispanics are either immigrants or the children of immigrants (Marotta & Garcia, 2003), Hispanic emerging adults (college students as well as individuals in the workforce) are likely to face cultural challenges—such as acculturation and acculturative stress—in addition to the typical challenges of emerging adulthood (e.g., choosing a career, finding a suitable relationship partner; Arnett, 2000). Perhaps because of the compounding of normative and cultural challenges, Hispanics are disproportionately represented among cases of major depression in the U.S. (Lewis-Fernandez, Das, Alfonso, Weissman, & Olfson, 2005). Given the preponderance of young people in the Hispanic population (40% under the age of 20 years; Marotta & Garcia, 2003), further research is needed to understand better the cultural correlates of well-being and distress in this population is needed.

Acculturation, which is defined in this paper as cultural adaptation among immigrants and their immediate descendents (Berry, Phinney, Sam, & Vedder, 2006), is an important correlate of Hispanic health and well-being (e.g., Romero, Carvajal, Valle, & Orduña, 2007). However, studies examining the association between acculturation and mental-health outcomes in Hispanics have yielded inconsistent findings, with some studies reporting adverse consequences of acculturation and others not. Among Hispanics, studies have documented complex and contradictory findings, including positive, negative, and even curvilinear associations between acculturation and indexes of mental health (for reviews, see Lara, Gamboa, Kahramanian, Morales, & Bautista, 2005; Rogler, Cortes, & Malgady, 1991). Thus, the association between acculturation and mental-health outcomes among Hispanic populations remains unclear.

Individuals experience acculturation in different ways, with some finding it more challenging than others. Research on acculturation and health out-

comes has stressed the importance of examining both direct and indirect (mediated) associations between acculturation and psychosocial functioning in Hispanics (e.g., Schwartz, Zamboanga, & Jarvis, 2007; Umaña-Taylor & Updegraff, 2007). One such mediator, which may help to explain the relationship between acculturation and mental-health outcomes, is acculturative stress. By definition, *acculturative stress* refers to the undesirable “side effects” of acculturation and includes language issues, perceived cultural incompatibilities, and cultural self-consciousness (Gil, Vega, & Dimas, 1994; Padilla, Cervantes, Maldonado, & Garcia, 1988).

The ways in which a Hispanic person chooses to acquire (or not) American cultural practices and values, and to retain (or not) Hispanic cultural practices may be associated with specific types of acculturative stress. For example, Hispanics who do not speak English well, or who do not engage in American cultural activities, may perceive pressures to do so (Schwartz & Zamboanga, 2008). In bicultural contexts such as Miami, failing to retain Hispanic cultural values and practices may also be associated with perceived pressures to improve one’s Spanish-language skills and to become “more Hispanic” (Schwartz, Zamboanga, Rodriguez, & Wang, 2007). Acculturative stress has been shown to be associated with negative outcomes, such as increased levels of depression and suicidal ideation, lowered self-esteem, and physical health problems (Finch, Hummer, Kolody, & Vega, 2001; Miranda & Matheny, 2000). Although Cuban Americans represent a numerical and cultural majority in Miami, they may nonetheless experience acculturation-related stressors, given the pervasiveness of American cultural influences, as well as pressures from the large heritage-culture community (Schwartz & Zamboanga, 2008).

Examining the role of acculturative stress as it relates to acculturation and psychosocial functioning, therefore, may be important to our understanding of Hispanic health and well-being. Thus, one of the primary goals of the present study was to test whether, and the extent to which, acculturative stress will mediate the association between acculturation and psychosocial functioning. In the following sections, we review research on acculturation, acculturative stress, and psychosocial functioning among Hispanic emerging adults.

Acculturation

Acculturation represents changes in values and behaviors that occur as a result of contact between culturally dissimilar individuals or groups (Cabassa, 2003). Although it is most often studied among new immigrants or among groups that have been colonized (Berry, 1994), acculturation is also salient for individuals who are born into immigrant households within the

receiving society, given that the heritage culture is often transmitted within the home (Hughes, 2003; Torres, 2004).

Many studies examining the association between acculturation and mental health have relied on a unidimensional conceptualization of acculturation, in which heritage-culture retention and American culture acquisition are conceptualized as opposite ends of a single continuum (e.g., Gil, Wagner, & Vega, 2000; Ramirez et al., 2004). This viewpoint assumes that acquiring-receiving cultural values and practices automatically results in a loss of heritage values and practices (cf. Nguyen & Benet-Martínez, 2007). More recently, however, scholars (e.g., Phinney & Flores, 2002; Ryder, Alden, & Paulhus, 2000) have introduced bidimensional models of acculturation. These models frame heritage and American culture as independent from one another, such that orienting oneself toward American culture does not necessarily imply abandoning one's heritage culture. Such models allow for the possibility of biculturalism, in which the person strongly endorses heritage as well as American cultural values and practices (e.g., Benet-Martínez & Haritatos, 2005; Benet-Martínez, Leu, Lee, & Morris, 2002). Although a more complete discussion of biculturalism is beyond the scope of the present article (for an extended discussion of biculturalism, see Nguyen & Benet-Martínez, 2007), individuals who endorse both their heritage and receiving cultures may, in a sense, be considered bicultural (Phinney & Flores, 2002).

As mentioned previously, acculturation is a multidimensional process and encompasses behavioral as well as value-based dimensions. In terms of how acculturation is assessed, behavioral aspects of acculturation are commonly measured through language use, media, and food preferences (Zea, Asner-Self, Birman, & Buki, 2003). Conversely, the subjective experience of heritage-culture retention can be measured through *ethnic identity*, which refers to feelings about, identification with, and relation to one's ethnic group within the receiving society (Phinney, 2003). Because ethnic identity refers to cultural values, whereas acculturation measures generally index cultural behaviors (Cabassa, 2003), ethnic identity (at least as commonly measured) may be somewhat distinct from the process of behavioral acculturation (Schwartz, Zamboanga, & Jarvis, 2007). Thus, when used together, ethnic identity and behavioral acculturation may provide more information about cultural adaptation than would either index alone. Because individuals can identify with a cultural tradition without speaking its language or engaging in other commonly indexed behaviors (e.g., associating with heritage-culture friends), including behavioral acculturation as the only index of cultural adaptation may produce limited or misleading conclusions (for further discussion, see Portes & Rumbaut, 2001).

Acculturation and Psychosocial Functioning

There is rich literature on the direct associations of acculturation and Hispanic health outcomes, although most of these studies have used unidimensional models of acculturation (Sullivan et al., 2007). Concurrently, a growing body of literature has noted that the discrepant findings in acculturation research may be a result of differences in the ways in which acculturation has been conceptualized and measured (e.g., Matsudaira, 2006; Zane & Mak, 2003). Unidimensional models have been criticized for the zero-sum assumption in which acquiring the receiving culture implies discarding the heritage culture (Nguyen & Benet-Martínez, 2007). Therefore, distinguishing the findings from studies using unidimensional versus bidimensional models of acculturation, as well as using bidimensional models in acculturation research, may be necessary to explain and resolve the inconsistencies in the acculturation and mental-health literature.

Various dimensions of acculturation—including a sense of ethnic identity, the acquisition of the host society's cultural norms and behaviors, and retention of one's cultural background—have been associated (albeit differently) with psychosocial functioning and health risk behaviors among Hispanic adolescents and young adults (Raffaelli, Zamboanga, & Carlo, 2005; Schwartz, Zamboanga, & Jarvis, 2007; Umaña-Taylor & Updegraff, 2007; Zamboanga, Raffaelli, & Horton, 2006). As such, delineating the behavioral versus subjective dimensions of the acculturation process, and examining their separate contributions to psychosocial functioning, can help us better understand the link between acculturation and psychosocial functioning in Hispanic emerging adults. Furthermore, specific aspects of psychosocial functioning have been found to be especially relevant for Hispanic immigrants (e.g., Hernandez, Plant, Sachs-Ericsson, & Joiner, 2005).

In particular, depression and anxiety have been identified as some of the most common mental-health problems among acculturating individuals (Berry, 1997; Berry & Sam, 1997). Symptoms of depression and anxiety have often served as proxy indicators for negative psychosocial functioning, sometimes categorized as *internalizing symptoms* or *ataque de nervios*, which is a culture-bound form of distress specific to Hispanics (cf. Grames, 2006; Pumariega, Rothe, & Pumariega, 2005). Conversely, self-esteem has been considered an indicator of psychological well-being or psychological resilience among ethnic minority-group members (e.g., Bracey, Bámaca, & Umaña-Taylor, 2004). Self-esteem has been shown to be positively associated with acculturation (Moyerman & Forman, 1992; Sam, 2000) and with ethnic identity (Phinney, Cantu, & Kurtz, 1997; Giang & Wittig, 2006; Greig, 2003). Other studies have found negative outcomes (e.g., depression) to be positively

linked with acculturation (cf. Ramos, 2005; Torres & Rollock, 2007) and with ethnic identity (Cuéllar & Roberts, 1997; Joiner, Perez, Wagner, Berenson, & Marquina, 2001).

These opposing sets of results highlight inconsistent findings in the association between acculturation and mental health. Examining the role of mediating mechanisms may help us to understand better the pathway between acculturation and mental health. Acculturative stress, in particular, may help to explain how acculturation may be related to both positive and negative psychosocial functioning.

Acculturation, Acculturative Stress, and Psychosocial Functioning

Acculturative stress differs from other types of stress (e.g., minority status, socioeconomic stress) because it is rooted in the experience of acculturation (Berry, 2003). Berry and colleagues (Berry, Kim, Min, & Mok, 1987) have described *acculturative stress* as a “reduction in health status (including psychological, somatic, and social aspects) of individuals who are undergoing acculturation, and for which there is evidence that these health phenomena are related systematically to acculturation phenomena” (p. 491).

Ethnic identity and acculturation have been shown to be associated with acculturative stress, both conceptually and empirically. Researchers have described ethnic identity as a buffer against acculturative stress, suggesting that one’s sense of belongingness to an ethnic group can be protective against the side effects of the acculturation process. Roysircar-Sodowsky and Maestas (2000) described the interplay between acculturation and ethnic identity as a “push-and-pull phenomenon” (p. 134) such that an individual may feel the push to acculturate to the majority society, as well as the pull toward one’s ethnic group. Although this phenomenon implies a unidimensional conceptualization of acculturation, it can also apply within the bidimensional view of acculturation. Rudmin (2003) argued that bicultural individuals—those who endorse both the heritage and receiving cultures—experience increased levels of pressure from both the heritage and receiving cultures. Thus, even bicultural individuals may be assumed to experience stressors related to both the pushes and pulls of acculturation.

Multidimensionality of Acculturative Stress

Acculturative stress can be manifested in many ways, such as feeling the pressure to speak the language of the receiving culture (Rodriguez, Myers,

Mira, Flores, & Garcia-Hernandez, 2002). Language use is one of the most commonly used proxy measures in acculturation research, and it has been used frequently as an indicator of cultural adaptation. Berry and colleagues (Berry, Poortinga, Segall, & Dasen, 1992) described language use as “the heart of dual questions of cultural maintenance or participation in the larger society . . . for many people, loss of language is equated with loss of culture” (p. 305). As such, for Spanish-speaking Hispanics in the U.S., retaining their native language may be particularly important. Miranda and Matheny (2000) cited language use as one of the most relevant factors in acculturative stress research. They found that greater preference for Spanish language predicted higher levels of acculturative stress. This may be the case because many Americans view Spanish (and other immigrant languages) as a threat to American national identity (Barker et al., 2001).

Although acculturative stress has been shown to operate primarily among non-native English speakers in the U.S., it can also apply to individuals who are proficient in the language of the receiving society. Acculturative stress can result from one’s negotiation with both the receiving and heritage cultures (Rudmin, 2003), especially in cases in which satisfying the demands of the heritage-culture community would be expected to create problems with the receiving culture, and vice versa. Drawing on multidimensional models of acculturative stress, Hispanic individuals may experience different types of acculturative stress, depending on their levels of heritage and receiving cultural orientations (Schwartz & Zamboanga, 2008). Romero and Roberts (2003) found that “less acculturated” Hispanic youth tended to experience high levels of stress related to speaking better English; whereas their “more acculturated” counterparts reported stress because of the need to speak better Spanish. Given these findings, it is conceivable that different dimensions of acculturation may be associated with different types of acculturative stressors. In turn, it is plausible that various dimensions of acculturative stress might be differentially associated with psychosocial outcomes. This may be particularly evident in bicultural contexts like Miami, where Hispanic cultural forces are prominent among the older generations but where many young people are bicultural (Schwartz, Pantin, Sullivan, Prado, & Szapocznik, 2006).

The Present Study

The current investigation is designed to examine the relations among acculturation, acculturative stress, and psychosocial functioning among Hispanic emerging adults. Given the caution expressed regarding combining

various Hispanic subgroups into a single pan-ethnic group (Umaña-Taylor & Fine, 2001), we focused specifically on individuals of Cuban descent.

Cuban Americans are the third largest Hispanic group in the United States (Marotta & Garcia, 2003) and the largest Hispanic group in Miami (and in Florida in general; Stepick & Stepick, 2002), where the present study was conducted. Although the earliest Cuban immigrants to Miami were economically advantaged and were most likely to be phenotypically similar to White Americans, more recent arrivals have been more similar to other Hispanic groups. Many of the Cubans arriving during and after the 1980 Mariel boatlift come from lower or lower-middle income backgrounds, and many have been non-White (Croucher, 2002). Moreover, Schwartz and Zamboanga (2008) found that, even in the heavily Hispanic context of Miami, individuals who were less oriented toward American culture were most likely to report perceptions of acculturative stress and of ethnic discrimination. The patterns observed in the present sample of Cuban-descent emerging adults, therefore, may be expected to generalize, to a large extent, to the larger U.S. Hispanic population.

The goal of this study was to investigate the association between acculturation and psychosocial outcomes, both (a) directly and (b) indirectly through acculturative stress. We examined three dimensions of acculturation—orientation toward heritage cultural practices, orientation toward receiving cultural practices, and ethnic identity—as related to internalizing symptoms (i.e., depression, anxiety) and to positive psychosocial functioning (i.e., self-esteem). We also examined four dimensions of acculturative stress—pressures to acculturate, pressures against acculturation, Spanish competency pressures, and English competency pressures—as possible mediating mechanisms between acculturation and psychosocial functioning.

We hypothesize that acculturation variables (i.e., American cultural orientation, heritage-cultural orientation, ethnic identity) will be directly associated with self-esteem and with internalizing symptoms. Given the inconsistencies that characterize the extant literature, we did not advance specific hypotheses regarding the directionality of these associations. We also anticipate that different dimensions of acculturative stress will mediate the associations between different dimensions of acculturation and of psychosocial functioning.

Consistent with our efforts to delineate subjective versus behavioral dimensions of acculturation, we expect that pressures toward and against acculturation would mediate the association between ethnic identity and psychosocial functioning, and that language competency pressures will mediate the relations of Hispanic and American cultural orientations to psychosocial functioning. However, given the exploratory nature of our

study, we do not predict the direction of these indirect relations. However, we do expect that acculturative stress will be associated with increased levels of internalizing symptoms and with decreased levels of self-esteem.

Method

Participants and Procedure

The present sample consisted of 199 Cuban-descent emerging-adult students (80% female; M age = 20.1 years, $SD = 3.8$) who attend a culturally diverse university in Miami. Participants selected for inclusion in the present analyses were those reporting that at least one of their parents was born in Cuba. In terms of immigrant generation, 23% ($n = 45$) of participants were born outside the United States, 61% ($n = 120$) were born in the United States to two foreign-born parents, and 16% ($n = 33$) were born in the United States and reported that one of their parents was born in Cuba and the other was born in the United States; one participant did not report a birth country. In terms of socioeconomic status, 16% of participants reported annual family incomes below \$30,000; 26% reported between \$30,000 and \$50,000; 30% reported between \$50,000 and \$100,000; and 17% reported above \$100,000. Approximately 11% of participants did not know their family's annual income.

We collected our data through an online data-collection platform. Data were gathered from a largely Hispanic university that has been designated as a Minority Serving Institution by the U.S. Department of Education (2002). The majority of Hispanic students attending this university are of Cuban descent. We recruited respondents from introductory psychology courses and directed them to the study website through the Psychology Department's experiment participation system. Although all students who expressed interest in the study were allowed to participate, only participants indicating that they, or at least one of their parents, were born in Cuba were used in the present analyses.

The Institutional Review Board at the institution where this project was conducted approved the study procedures, and we obtained informed consent before any data were collected. The entire assessment took approximately 1 hr to complete.

Measures

All of the measures used in the present study were administered using a 5-point Likert-type scale, with higher scores indicating greater endorsement

Table 1

Descriptive Statistics for Study Variables

Variable	Cronbach's α	<i>M</i>	<i>SD</i>	Range
Acculturation				
American orientation	.84	59.76	6.90	38–72 (15–75)
Heritage orientation	.90	58.43	10.99	30–84 (17–85)
Ethnic identity	.87	43.72	7.14	20–60 (12–60)
Acculturative stress				
Spanish competency pressure	.84	12.31	5.18	7–31 (7–35)
English competency pressure	.82	9.23	3.60	7–22 (7–35)
Pressure to acculturate	.77	14.89	4.63	7–32 (3–35)
Pressure against acculturation	.80	7.06	2.86	4–18 (4–20)
Psychosocial functioning				
Self-esteem	.86	87.73	14.15	44–120 (25–125)
Internalizing symptoms	.91	87.83	25.04	39–158 (38–190)

Note: Numbers in parentheses represent the range of possible scores.

of the construct in question. Cronbach's alpha estimates, reported in Table 1, were calculated using the present dataset.

Behavioral acculturation. We used the Stephenson Multigroup Acculturation Scale (Stephenson, 2000) to assess orientation toward heritage (17 items; e.g., "I listen to music of my ethnic group") and American (15 items; e.g., "I like to eat American foods") cultural practices in areas such as language use, food, and entertainment. Participant responses were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Ethnic identity. We assessed ethnic identity using the Multi-Group Ethnic Identity Measure (MEIM; Roberts, Phinney, Masse, Chen, & Roberts, 1999). The MEIM measures two aspects of ethnic identity: ethnic-identity exploration (7 items; e.g., "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs"), which refers to the extent to which an individual has considered his or her ethnicity and has decided what it means to him or her; and affirmation and belonging (5 items; e.g., "I have a lot of pride in my ethnic group"), which represents the extent

to which an individual identifies with and values his or her ethnic group. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

In their article validating the newest version of the MEIM, Roberts et al. recommended summing the two subscales to create a total ethnic-identity score. The correlation between these two subscales in the present sample ($r = .64$) supports this strategy. The MEIM has been used successfully with Hispanic samples, including college students (Phinney, Dennis, & Osorio, 2006).

Acculturative stress. We measured acculturative stress using the Multidimensional Acculturative Stress Inventory (MASI; Rodriguez et al., 2002). The measure, which has been used previously with Hispanic college students (Schwartz, Zamboanga, Rodriguez, et al., 2007), contains four subscales: pressures to acculturate (7 items; e.g., "It bothers me when people don't respect my family's cultural values"), pressures against acculturation (4 items; e.g., "People look down upon me if I practice American customs"), Spanish-language competency pressures (7 items; e.g., "I feel uncomfortable being around people who only speak my family's heritage language"), and English-language competency pressures (7 items; e.g., "I feel uncomfortable being around people who only speak English"). All items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Self-esteem. We assessed self-esteem using the Coopersmith Self-Esteem Scale (25 items; Coopersmith, 1981). This measure has been used successfully with college students from various ethnic backgrounds, including Hispanics (e.g., Schwartz, Côté, & Arnett, 2005). Participants recorded their responses on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include "I'm a lot of fun to be with," and "I have a low opinion of myself" (reverse-scored).

Internalizing symptoms. We measured internalizing problems in terms of depression and anxiety. We assessed depressive symptoms using the Center for Epidemiologic Studies Depression scale (CES-D; 20 items; Radloff, 1977). We measured anxiety using the Beck Anxiety Inventory (BAI; 18 items; Beck, Epstein, Brown, & Steer, 1988). Both of these measures refer specifically to participants' experiences in the week prior to assessment. Sample items include "I have felt down and unhappy this week" (CES-D), and "I have been worrying a lot this week" (BAI). We used a 5-point response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) for both of these measures.

Given the strong intercorrelations between anxiety and depression scores ($r = .84, p < .001$), we summed the two subscales to create a total internalizing symptoms score. The CES-D and BAI are widely used and have been used in Hispanic college student samples (Constantine, Okazaki, & Utsey, 2004; Contreras, Fernandez, Malcarne, Ingram, & Vaccarino, 2004).

Results

Descriptive Statistics and Bivariate Correlations

Means, standard deviations, and internal consistency estimates from the present sample are presented in Table 1. Bivariate correlations among study variables are presented in Table 2.

Tests of Study Hypotheses: Structural Equation Modeling

The primary test of the study hypothesis involved ascertaining the fit of our specified model to the data. To evaluate model fit, we used three standard fit indexes: chi-square statistic, which tests the null hypothesis of perfect fit to the data; comparative fit index (CFI), which compares the specified model to a null model with no paths; and root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR), both of which index the extent to which the covariance matrix specified by the model deviates from the covariance matrix observed in the data. For model fit to be considered adequate, the CFI should be greater than .90 (where values of .95 and above indicate excellent fit), the RMSEA should be less than .08 (where values of .05 and below indicate excellent fit), and the SRMR should be less than .06 (Hancock & Freeman, 2001; Kline, 2006). The chi-square index tests the hypothesis of perfect fit to the data and often produces a significant result, even when the model reasonably represents the data (Keith, 2006); as a result, the chi square is reported but not used in interpretation. Additionally, it should be noted that each fit index is calculated differently, and that all fit index cutoffs are arbitrary (Marsh, Hau, & Wen, 2004; Vandenberg, 2006). Consequently, we do not advocate rejecting a model that satisfies the majority, but not all, of the fit index criteria (cf. Schwartz, 2007).

The model provided an adequate fit to the data, $\chi^2(6) = 31.01$, $p < .001$ (CFI = .96; RMSEA = .11; SRMR = .04; see Figure 1). Although the RMSEA was elevated, the SRMR indicated good fit. American orientation was positively related to pressures to speak Spanish, and was modestly and negatively related to the other measures of acculturative stress. Heritage-culture orientation was negatively related to pressure against acculturation and to pressure to speak Spanish, and was positively related to pressures to acculturate and to speak English. Heritage-culture orientation was also positively related to self-esteem. Ethnic identity was positively related to pressure to acculturate. In turn, pressure to acculturate was negatively related to self-esteem; and pressure to speak Spanish was positively related to internalizing symptoms.

Table 2
Bivariate Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8
1. American orientation	—							
2. Heritage orientation	-.06	—						
3. Ethnic identity	.51***	.09	—					
4. Spanish competency pressure	-.58***	.13	-.30***	—				
5. English competency pressure	.20**	-.42***	.13	.08	—			
6. Pressure to acculturate	.13	-.40***	.23**	.13	.45***	—		
7. Pressure against acculturation	-.26***	-.15*	-.18*	.47***	.40***	.41***	—	
8. Self-esteem	.33***	.16	.32***	-.36***	.02	-.17	-.30**	—
9. Internalizing symptoms	-.15	.02	-.08	.31***	.07**	.15*	.31***	-.56***

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

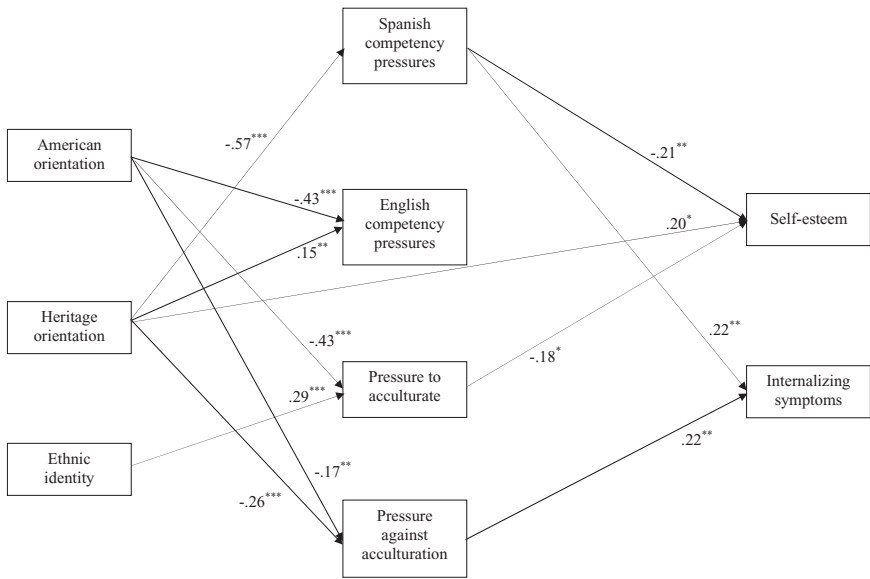


Figure 1. Structural equation model. * $p < .05$. ** $p < .01$. *** $p < .001$.

We then tested the extent to which (a) the relationships of American and heritage orientations to self-esteem and internalizing symptoms would be mediated through pressure to speak Spanish; and (b) the relationships of American orientation and ethnic identity to self-esteem would be mediated through pressure to acculturate. To test for mediation, we used the asymmetric distribution of products test (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; MacKinnon, Lockwood, & Williams, 2004). This test, which is used with structural equation or path models, computes a 95% confidence interval around the product of the two unstandardized path coefficients that comprise the mediating pathway. If this confidence interval does not include 0, then mediation is assumed at $p < .05$.

In cases in which significant mediation emerged, we report the product of the two standardized path coefficients, which can be interpreted as a standardized regression coefficient. It is worth noting that, according to MacKinnon (2008), a direct relationship is not required to test for mediation. Indeed, it is possible for the relationship between two variables to be primarily indirect, such that there is little or no evidence of a relationship unless the mediator is included in analysis. For this reason, tests of mediation proceeded despite the fact that most of the direct relationships were nonsignificant.

The results indicate that pressure to speak Spanish mediated the relationship between heritage-culture orientation and internalizing problems ($\beta = -.12, p < .005$), and that pressure against acculturation also approached significance as a mediator of this relationship ($\beta = -.06, p = .052$). Pressure to speak Spanish also mediated the relationship between heritage-culture orientation and self-esteem ($\beta = .12, p < .05$). Pressure to acculturate approached significance as a mediator of the relationship between American culture orientation and self-esteem ($\beta = .08, p = .059$). None of the indirect paths involving ethnic identity were statistically significant.

We then examined the extent to which the model fit equally across gender. To do this, we estimated and compared two models: (a) an unconstrained model in which all path coefficients were free to vary across gender; and (b) a constrained model in which each path coefficient was constrained equally across gender. To the extent to which the unconstrained and constrained models fit the data equivalently, the model could be assumed to fit equivalently for men and for women.

We compared the fit of the constrained and unconstrained models using three standard indexes from the invariance testing literature: difference in chi-square values between the two models ($\Delta\chi^2$), difference in CFI values (ΔCFI), and difference in non-normed fit index values (ΔNNFI). Although NNFI was not used to examine the fit of a single model to the data, it is adjusted for model parsimony and is especially sensitive to small differences in fit between models (Little, 1997). The null hypothesis of invariance would be rejected if at least two of the following three criteria were satisfied: $\Delta\chi^2$ significant at $p < .05$ (Byrne, 2001); $\Delta\text{CFI} > .01$ (Cheung & Rensvold, 2002); and $\Delta\text{NNFI} > .02$ (Vandenberg & Lance, 2000). Invariance tests indicated that the model fit equivalently across gender, $\Delta\chi^2(15) = 11.68, p = .70$; $\Delta\text{CFI} < .001$; and $\Delta\text{NNFI} < .001$.

Finally, we examined a stress-buffering model in which acculturation and ethnic identity were posited as moderating the associations between acculturative stress and adjustment. To accomplish this, we created interaction terms between the acculturation/ethnic-identity variables and the acculturative stress subscales (12 interaction terms in total). These interaction terms were created by centering (i.e., converting to standard scores) the main effects and multiplying the centered terms (Aiken & West, 1991). We then estimated three separate stress-buffering path models: one for American cultural practices, one for Hispanic cultural practices, and one for ethnic identity. Within each model, interaction terms between the cultural variable in question and each of the acculturative stress variables (4 interaction terms within each model) were allowed to predict self-esteem and internalizing symptoms. Across these three models, none of the 24 paths between these interaction terms and either of the adjustment

variables reached or approached statistical significance (all β s \leq .16, all p s \geq .11).

Discussion

The current study was designed to draw on multiple dimensions of acculturation in exploring inconsistencies that have been found in the acculturation/mental-health pathway. Our goals were to examine the direct and indirect associations between acculturation, acculturative stress, and psychosocial outcomes; and to investigate different dimensions of acculturative stress in mediating the relations between acculturation and psychosocial functioning. We used a sample of Cuban Americans, which are the largest Hispanic group in Florida and the third largest in the U.S. The results support our expectation that American cultural orientation, Hispanic cultural orientation, and ethnic identity are all associated—either directly or indirectly—with self-esteem. However, only Hispanic cultural orientation showed any relationship to internalizing symptoms. Moreover, the results support the hypothesis that different dimensions of acculturative stress mediate the association of American- and heritage-cultural orientations to positive and negative psychosocial outcomes. Although the pattern of findings is somewhat modest, the results highlight the relevance of acculturative stress to our understanding of the acculturation/mental-health pathway. Our results also underscore the need to examine acculturative stress as a multidimensional construct.

The present study yielded three key findings. First, our results show that individuals who were highly oriented toward Hispanic culture reported increased levels of self-esteem. Particularly in an ethnic enclave (e.g., Miami), support received from the heritage-culture community may contribute to enhanced feelings of self-worth among Cuban emerging adults.

Second, we found that Spanish competency pressures and pressure against acculturation mediated the relations between Hispanic orientation and internalizing symptoms. Being highly oriented to Hispanic culture appears to decrease pressures to speak Spanish and against acculturation. Reductions in these pressures may then be associated with experiencing lower levels of internalizing symptoms. Such a pattern of findings further highlights the importance of maintaining one's ties to the heritage culture, and highlights the protective role of heritage orientation against negative mental-health outcomes (cf. Le & Kato, 2006). Retaining heritage-culture orientations and practices may be especially important in contexts in which there is a significant and visible heritage-culture community (Schwartz, Montgomery, & Briones, 2006); in this case, the Cuban community in Miami. In more monocultural

contexts that are strongly oriented toward the receiving culture, retaining heritage-culture values and practices may be less adaptive (cf. Bourhis, Moïse, Perreault, & Senécal, 1997).

Third, our findings show that pressure to acculturate mediated the association between American orientation and self-esteem. That is, individuals who were highly oriented toward American culture experienced lowered pressure to acculturate and, in turn, reported high levels of self-esteem. It seems, then, that high levels of cultural connectedness to the receiving society are beneficial to one's sense of self-worth. Even among Cuban Americans in Miami, connection to the larger American cultural context appears to be important to one's sense of self-esteem.

Overall, the present results suggest that orientations toward the heritage and receiving cultural contexts are both important vis-à-vis acculturative stress and, subsequently, with psychosocial functioning (cf. Schwartz, Zamboanga, & Jarvis, 2007). In the current study, we demonstrated that being oriented toward both American and Hispanic cultures actually protects Cuban American emerging adults from acculturative stressors and is associated with more favorable mental-health outcomes. In turn, reduced acculturation-related stressors can serve as buffers against negative mental-health outcomes and can enhance positive mental health.

Consistent with prior research, our findings suggest that bicultural individuals, who endorse both the heritage culture and the receiving culture, may report the most favorable adjustment. Such a conclusion runs counter to Rudmin (2003), who argued that biculturalism represents a largely negative condition because of pressures from both the heritage and receiving communities. Other studies have noted the benefits of a bicultural style of cultural adaptation as being most beneficial (e.g., Balls Organista, Organista, & Kurasaki, 2003; Berry, 2003; Coatsworth, Maldonado-Molina, Pantin, & Szapocznik, 2005). Although biculturalism may imply a delicate balance between cultures, achieving this balance appears to be quite beneficial for the mental health of Cuban American emerging adults.

Contrary to our hypotheses, no mediated effects emerged involving ethnic identity. That is, ethnic identity was not associated with psychosocial functioning, either directly or through any dimension of acculturative stress. This null set of findings is important, as it contributes to our understanding of the multidimensionality of acculturation. Our results are consistent with prior research suggesting that, in the presence of other acculturation (Schwartz, Zamboanga, & Jarvis, 2007) or identity (Schwartz, Zamboanga, Weiskirch, & Rodriguez, 2009) variables, ethnic identity does not emerge as a significant predictor of behavioral, mental-health, or adjustment outcomes. This pattern of findings supports the contention that ethnic identity and behavioral acculturation (in this case, measured by orientation to Hispanic/

American culture) represent distinct components of the acculturation process (cf. Raffaelli et al., 2005, Schwartz, Zamboanga, & Jarvis, 2007; Zamboanga et al., 2006). The findings also suggest that cultural behaviors may be more salient than cultural values, at least with regard to the mental-health outcomes examined here.

Applied Implications

In the current study, biculturalism appeared to represent the most adaptive mode of acculturation in enhancing feelings of self-esteem, as well as decreasing internalizing symptoms of depression and anxiety. Our findings highlight the importance of continued understanding of the cultural context of stress (Romero et al., 2007) and helping individuals to find a balance between mainstream and heritage cultures without feeling the pressure to conform to one or the other. The importance of being included in and feeling accepted by both the heritage-cultural community and the receiving society (Rudmin, 2003; Schwartz, Montgomery et al., 2006) cannot be overlooked with regard to the mental health and well-being of Cuban American college students (and perhaps those from other Hispanic backgrounds), especially those residing in areas with large heritage-culture enclaves.

The findings from this study have important implications for prevention work with Cuban American (and perhaps other Hispanic) college students. In promoting a learning environment that encourages biculturalism, researchers, practitioners, and college programmers are encouraged to recognize that acculturative stress may operate differently for different individuals from the same ethnic background. For individuals who may be more oriented toward American culture, pressures to maintain Spanish language proficiency may be especially important to consider, whereas for others who are less American-oriented, greater degrees of stress may come from perceived pressures to adopt mainstream American cultural practices. Given the present results, biculturalism should be encouraged using a variety of methods that capture the multidimensionality of acculturation and acculturative stress.

Study Limitations

The present findings should be interpreted in light of several important considerations and limitations. First, it is important to highlight the disproportionate number of female participants in the present study. Although gender differences did not emerge for any of the variables in the current study, and although we found that our model fit equivalently across gender, the findings might have been different with a more gender-balanced sample. Second, it is important to note the overrepresentation of second-generation

immigrants in this study, as the findings may have differed had a greater proportion of the respondents been born in Cuba. Within an ethnic enclave such as Miami, generational status may impact acquisition of English and of American cultural practices, although it likely will not affect ethnic identity and retention of heritage-culture practices (Schwartz, Pantin et al., 2006). Third, the cross-sectional design used in the present study does not allow us to draw conclusions regarding causality. Longitudinal research will be needed to support such conclusions. Fourth, our study was conducted in Miami, which has been a Hispanic ethnic enclave for two generations (Stepick & Stepick, 2002) and may be uniquely receptive to Hispanic inclusion and advancement. In contrast to other regions of the U.S., the cultural environment of Miami may more readily provide resources to help Hispanics (especially Cubans) to become increasingly bicultural or to retain customs and traditions of their heritage culture (Croucher, 2002). Therefore, data gathered in this cultural context may be unique, and it is entirely possible that a replication of this study in a different part of the country might yield different findings. Thus, context is an important consideration in our understanding of ethnic identity and acculturation-related processes (Umaña-Taylor & Shin, 2007).

Despite these limitations, the present investigation contributes to research on acculturation and mental health. Our findings shed light on the significance of considering multiple dimensions of acculturation and acculturative stress with regard to psychosocial functioning in Cuban American emerging adults. The present study also serves as a framework for similar research using other Hispanic subgroups. It is hoped that these findings will help clinicians and researchers to incorporate acculturative stress (and ways to reduce it) into their conceptualization of Hispanic mental health. Understanding the patterns and predictors of individual differences in the acculturation experience, as well as the types of stressors that accompany the process, can help us to better promote Hispanic health and well-being.

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