

THE BEST OF BOTH WORLDS

Biculturalism, Acculturation, and Adjustment

Among Young Mainland Puerto Rican Mothers

IRENE R. LÓPEZ
JOSEFINA M. CONTRERAS
Kent State University

The relations among language acculturation, biculturalism, and psychological adjustment were studied in a sample of 54 young mainland Puerto Rican mothers. Participants were interviewed in the language of their choice concerning their level of symptomatology (i.e., depression, anxiety, somatization, hostility, interpersonal sensitivity), language acculturation, monocultural involvement (assessed by separate adherence to American and Puerto Rican cultural values), and dual cultural involvement (assessed by a combination of cultural values). Results indicated that biculturalism significantly predicted adjustment above and beyond monocultural involvement. In addition, although biculturalism and bilingualism were both significantly related to psychological adjustment, linguistic balance showed a stronger association with adjustment than biculturalism. Findings are discussed in light of the family, cultural, and developmental context in which young mainland Puerto Rican mothers are embedded.

Keywords: biculturalism; Puerto Rican; adolescent mothers; acculturation; psychological adjustment

Although recently, birth rates have declined slightly for all groups of adolescents in the United States, the decline has been smallest among Latina adolescents, such that the rate for Latinas is now larger than that of any other group in the United States (e.g., 83 Latino births per 1,000 vs. 68 and 29 births per 1,000 for African American and White births, respectively; National Center for Health Statistics, 2002). Unfortunately, the predominance of research on young mothers has focused on African Americans and Whites, and little is known about the factors that are associated with more optimal psychological functioning among young Latina mothers, in general, or Puerto Rican mothers, in particular.

A factor that may be especially relevant to young Latina mothers' adjustment is the acculturation process. Acculturation has traditionally been defined as the continuous and firsthand contact between cultures (Redfield, Linton, & Herskovits, 1936) that produces an effect on the individual, such as changes in behavior (e.g., language), identity, values, and attitudes (Graves, 1967). Researchers have proposed that the manner in which individuals deal with the acculturation process can have important implications for their psychological adjustment (Rogler, Cortés, & Malgady, 1991). For young mainland Puerto Ricans who exist at the juncture of Puerto Rican and American cultures, the acculturation process may be an especially

AUTHORS' NOTE: This research was based on the master's thesis of the first author and was awarded the Outstanding Student Research Award (1998) by Division 12, Clinical Psychology, Division VI, Ethnic Minority Division. A summary of the study was published in the division newsletter. This research was part of a larger study conducted by the second author, which was supported by grants from the Kent State University Applied Psychology Center. The authors wish to thank Maria Jimenez, Karen Munoz-Rothstein, Evelyn Rivera-Mosquera, Laura Raymond-Smith, and Danielle Reeves for their assistance in data collection, the participants who allowed us in their homes, the staff at the recruitment sites, and Dr. Lisa Flores for her valuable comments and suggestions.

JOURNAL OF CROSS-CULTURAL PSYCHOLOGY, Vol. 36 No. 2, March 2005 192-208

DOI: 10.1177/0022022104272901

© 2005 Sage Publications

significant factor in their psychological health (Comas-Díaz, 1988). However, to date, only two published studies have empirically examined relations between level of acculturation and psychological adjustment among Latina adolescent mothers (Orshan, 1996, 1999). Thus, the general goal of this study was to examine the predictive power of various aspects of the acculturation process (e.g., assessment of language and cultural values, unidimensional acculturation, and biculturality) in explaining the psychological adjustment of young mainland Puerto Rican mothers.

In the two published studies that have empirically examined acculturation level and psychological adjustment among pregnant and parenting Latina adolescents, language acculturation was found to be unrelated to the self-esteem (the only adjustment variable assessed) of either Puerto Rican (Orshan, 1996) or Dominican mothers (Orshan, 1999). However, studies examining the psychosocial profiles of pregnant and parenting Latina adolescents suggest very different profiles for highly acculturated versus less acculturated adolescents. For example, more highly acculturated adolescents are more likely to experience prenatal stress, receive less support from their child's father, stay in school, and remain single after conception than their less acculturated peers (Becerra & de Anda, 1984; Reynoso, Felice, & Shragg, 1993; Zambrana, Scrimshaw, Collins, & Dunkel-Schetter, 1997).

In addition, in a series of studies in Puerto Rico, adolescent mothers reported less life stress than adult Puerto Rican mothers (García Coll, Escobar, Cebollero, & Valcárcel, 1989), as well as White adolescents living in the U.S. mainland (García Coll, 1989). This led García Coll and her collaborators to conclude that adolescent parenting among (island) Puerto Ricans was not necessarily associated with negative psychological outcomes because their sociocultural environment was more accepting of this parenting choice (see García Coll & Vázquez García, 1996, for review). These studies are informative because they highlight how different cultural norms affect psychological outcome. However, for young mainland Puerto Rican mothers, these results may not necessarily apply because they are exposed to dual cultural norms by virtue of living in the U.S. mainland. In addition, variations in the levels of acculturation within mainland Puerto Ricans (Landale & Oropesa, 2002) further complicate the relation between acculturation and psychological outcomes (Contreras, López, Rivera-Mosquera, Raymond-Smith, & Rothstein, 1999).

The literature on acculturation and psychological adjustment among Latino adults, although more extensive, has yielded contradictory results (see Rogler et al., 1991, for a review of adult literature). Although some studies have reported a positive association between acculturation levels and adult adjustment, others have documented a negative relation (Burnam, Hough, Karno, Escobar, & Telles, 1987; Canabal & Quiles, 1995; Salgado de Synder, 1987; Torres-Matullo, 1976). The limited literature on acculturation and non-parenting Latino adolescents has also yielded a similar pattern of contradictory findings. The few studies that have focused on aspects of Latino adolescents' adjustment such as depression, internalizing problems, and self-esteem (Erkut, Szalacha, García Coll, & Alarcón, 2000; Gil & Vega, 1996; Rumbaut, 1994) have not yielded a conclusive pattern of results (see Gonzales, Knight, Morgan-Lopez, Saenz, & Sirolli, 2002, for a review of the child/adolescent literature).

Researchers have claimed that the reason for these conflicting results is the inappropriate or incomplete conceptualization and measurement of the acculturation construct (Cabassa, 2003; Chun, Balls Organista, & Marín, 2003; Rogler et al., 1991). Specifically, many studies have assessed acculturation with proxy measures, such as generational status and length of time in a foreign culture, or relied exclusively on behavioral components, such as language use and preference.

Language use and preference is an important component of the acculturation construct, and instruments designed to assess this component have proven to be reliable and valid (Cuéllar, Arnold, & Maldonado, 1995; Cuéllar, Harris, & Jasso, 1980; Neff & Hoppe, 1993; Szapocznik, Scopetta, Kurtines, & de los Angeles Aranalde, 1978). Nonetheless, it has been proposed that a more appropriate and complete measurement approach requires the assessment of the level of adherence to the values of both the ethnic and host cultures (Berry, 2003).

In addition, researchers have argued for the importance of assessing not only the extent to which individuals have taken on important aspects of the host culture (linear acculturation) but also the extent to which they have maintained or acquired key aspects of their culture of origin (Birnam, 1998; Cortés, Rogler, & Malgady, 1994). Thus, in searching for factors that may predict more optimal psychological functioning among Latina adolescent mothers, it is important to examine not only linear acculturation but also biculturalism (Szapocznik, Kurtines, & Fernandez, 1980).

Biculturalism, or integration, as it is sometimes referred to in the cross-cultural literature, is the maintenance of one's ethnic culture while participating in the host culture (Berry, 2003). Researchers generally agree that this is the most beneficial of all acculturation strategies, in part because it provides an individual with a wider repertoire of behaviors to choose from and can therefore assist in problem solving (Berry, 2003). In addition, available findings suggest that biculturalism is positively related to various indices of psychological functioning (Berry, 2003; LaFromboise, Coleman, & Gerton, 1993; Miranda & Umhoefer, 1998).

This strategy is therefore particularly relevant for mainland Latino youth who must learn to integrate elements of both their ethnic and host cultures. For example, young bicultural Latinos have been rated by their teachers as being better socially and academically adjusted than their monocultural peers (Szapocznik et al., 1980) and found to have a lower high school dropout rate than their English dominant peers (Feliciano, 2001). Similarly, bicultural Mexican American adolescents scored lower than their monocultural peers on variables related to psychological difficulties, such as loneliness and alienation (Suarez, Fowers, Garwood, & Szapocznik, 1997).

Furthermore, for young parenting Latinas, establishing a bicultural orientation may help them cope with their competing roles as adolescents and young parents. For example, researchers have noted that younger Latinos tend to acculturate faster than their elders, creating an acculturation gap between family members of different generations (Szapocznik & Kurtines, 1980). This acculturation gap may compound an already existing generational gap frequently found between adolescents and their parents (Szapocznik & Kurtines, 1980) and this, in turn, can be associated with increased family conflict (Kaplan & Marks, 1990; Miranda, Estrada, & Firpo-Jimenez, 2000; Szapocznik et al., 1978; Szapocznik & Kurtines, 1980). For young Latinas who are also parenting, this family conflict can have a strong effect on their psychological adjustment because they typically rely on their families for financial, emotional, and child care support more than other young mothers from other groups (de Anda & Becerra, 1984; Way & Leadbeater, 1999).

Hence, maintaining ethnic cultural values may allow Latina adolescent mothers to better negotiate the interpersonal demands present in their families of origin and benefit from the support their families provide (Contreras et al., 1999; Contreras, Narang, Ikhlas, & Teichman, 2002). In addition, adherence to the values of the host culture may prove beneficial because these young mothers must interact with institutions outside of the family, such as school, work, and medical and social service agencies, on behalf of their children and for their own personal care. Therefore, for parenting Latina adolescents, a

bicultural orientation, defined as a balanced cultural involvement, may predict psychological adjustment above adherence to either their ethnic or host culture, as well as over language acculturation.

Conceptually, the measurement of biculturality has faced many of the same problems associated with the measurement of acculturation. For example, should biculturality be assessed and understood as a unidimensional or a multidimensional phenomenon? In addition, how should biculturality be measured? Although there is consensus in the literature that both ethnic and host cultures should initially be assessed separately, when it comes to the analyses, some researchers have opted to collapse these indices, with higher scores indicating a more bicultural orientation (Szapocznik et al., 1980), whereas others have argued that these two indices should only be collapsed if there is a strong negative correlation between the two cultural scores (Berry, 2003). Thus there is still some disagreement as to how to treat these indices once they are tabulated; therefore, an additional goal of this study was to measure the distinctive predictive power of monocultural versus dual cultural involvement.

In sum, the overall goal of the study was to examine how different aspects of the acculturation process could predict the psychological adjustment of young mainland Puerto Rican mothers. First, we were interested in assessing whether biculturality, defined as dual and combined cultural involvement, could predict psychological functioning above and beyond the contributions of involvement in the American and Puerto Rican cultures assessed separately (monocultural involvement). We predicted that dual cultural involvement would be more strongly related to adjustment than the individual cultural involvement variables.

Second, we wished to assess the predictive utility of language acculturation vis-à-vis the role of biculturality, as language acculturation has been most often used in the literature and language skills are a prerequisite for involvement in any cultural group. We expected that both biculturality and language acculturation would be positively related to adjustment but that biculturality would predict adjustment above and beyond language acculturation given the developmental, family, and cultural context in which these young mothers are embedded.

Finally, because both English- and Spanish-speaking mothers were included in our study, and they were allowed to complete the study measures in either English or Spanish, we wanted to explore whether the predicted relations described above differed across the two language groups in our sample. Thus, we tested each of the two main study predictions across these two language groups.

To assess language acculturation, we used a modified version of the Acculturation Rating Scale for Mexican Americans (Cuéllar et al., 1980). This is the most widely used measure of acculturation and it has been adapted for use with various Latino groups (Rogler et al., 1991). To assess the acquisition/maintenance of American and Puerto Rican values (i.e., cultural involvement) and biculturality, we used the Puerto Rican Biculturality Scale (Cortés et al., 1994; Cortés et al., 2003). Because this is a recently developed instrument, an additional goal of this study was to assess its validity with a different Puerto Rican subgroup and to examine how a number of established criterion variables (e.g., generational level, years of schooling in the U.S. mainland) could predict biculturality. Finally, we obtained an index of psychological adjustment through the use of a revised Symptom Checklist (Derogatis, 1994). These scales have been previously used successfully to assess psychological functioning in Latina adolescent mothers (Contreras et al., 1999; Rhodes, Contreras, & Mangelsdorf, 1994) and adult Puerto Rican women (Inclán, 1983; Soto & Shaver, 1982).

METHOD

PARTICIPANTS

Fifty-four mainland Puerto Rican mothers participated in the study. They were recruited as part of a larger study of Latina adolescent mothers (Contreras et al., 1999). To qualify for the larger study, a mother had to have a healthy child (i.e., no birth/delivery complications, no known medical or developmental condition) between the ages of 1 and 3 years and be younger than 21 years of age when she had this child. For this study, only participants with two Puerto Rican parents were selected. At the time of delivery of the target child, the mothers' mean age was 17.58 ($SD = 1.63$; range = 14.2 to 20.2 years). At the time of the interview, the mean age of the mothers was 19.22 ($SD = 1.80$; range = 15.3 to 22.9 years). The mean age of the children was 20 months ($SD = 9$ months), 52% of the children were female, and 57% of the children did not have other siblings. Approximately one fourth of all participants were married (24%), and close to half (46%) lived with their partners (i.e., husbands or boyfriends). One third lived with a parent (30%), and 19% lived alone. With regard to education, 22% had acquired either a high school diploma/GED or some partial college, and 17% had either a part-time or full-time job. All participants were from low-income neighborhoods, and 85% were receiving welfare benefits. Most participants were first generation, with 65% born in Puerto Rico.

PROCEDURE

Participants were recruited through a health center, an office that serviced the Program for Women, Infants and Children, and a high school serving a low-income Latino, primarily Puerto Rican, neighborhood in a midsized Midwestern city. Participants were recruited by either face-to-face contact with bilingual research assistants or a Puerto Rican cultural broker, bilingual fliers, and word of mouth contacts/referrals by other participants. The participation rate for the overall study was 61%. The recruitment process took 1½ years to complete.

Once women agreed to participate, a home visit was scheduled. After explaining the study, written consent was obtained from all participants, and parental/guardian consent for women younger than 18 was secured prior to a visit. Participants were interviewed privately, in the language of their choice, by a female research assistant (English $n_1 = 28$, Spanish $n_2 = 26$). Questionnaires were part of a semistructured interview and were read aloud to the participants using a computer-assisted interview procedure. Upon completion, participants received a \$10 gift certificate and a small toy for their child. Interviews took an average of 1½ hours to complete.

MEASURES

To ensure that Spanish women could participate in the study, Spanish translations of all measures and recruitment materials were prepared. English questionnaires were first translated into Spanish by an independent rater, and a team of bilingual Latina researchers then reviewed the Spanish versions. All discrepancies were resolved via group consensus and pilot data were also gathered to further refine the Spanish translations. To empirically check the equivalency of the English and Spanish versions, the internal consistencies (Cronbach's alphas) and mean scores for each language version of the scales were compared. Means,

TABLE 1
Descriptive Statistics for Main Study Variables

	M ± SD			Cronbach's Alpha		
	Entire Sample (N = 54)	English Participants (n ₁ = 28)	Spanish Participants (n ₂ = 26)	Entire Sample (N = 54)	English Participants (n ₁ = 28)	Spanish Participants (n ₂ = 26)
Language acculturation	2.59 ± .81	3.21 ± .46*	2.01 ± .61*	.91	.69	.85
American cultural involvement	3.01 ± .72	3.33 ± .61*	2.67 ± .69*	.76	.75	.66
Puerto Rican cultural involvement	4.04 ± .49	3.93 ± .47	4.16 ± .49†	.75	.70	.80
Biculturality	2.14 ± .79	2.24 ± .71	2.03 ± .88	—	—	—
Symptomatology	1.71 ± .50	1.61 ± .39	1.83 ± .58†	.87	.82	.89

NOTE: Dash = not applicable.

* Significant mean differences between English and Spanish participants, $p < .001$.

† Marginal difference between English and Spanish participants, $p < .10$.

standard deviations, and alphas for the entire sample, and by language of administration, are presented in Table 1.

Language acculturation. A modified version of the original Acculturation Rating Scale for Mexican Americans (ARSMA) was used to assess language acculturation (Cuéllar et al., 1980). The modified version included 11 items concerning language use and preference in multiple contexts (e.g., "What language(s) do you usually speak with friends/your mother/your child?") rated on a 5-point scale ranging from 1 (*Spanish only*) to 5 (*English only*), with a midpoint of 3 (*both equally*). An overall score was obtained by averaging across items. Scores ranged from 1.00 to 4.18 (see Table 1 for means, standard deviations, and alpha coefficients).

As anticipated, those participants who completed the questionnaire in English scored significantly higher than those who responded in Spanish, $t(50) = 8.23$, $p < .001$. Cronbach's alpha coefficients were excellent for the entire sample and comparable to Cuéllar et al.'s (1980) original sample ($\alpha = .88$), as well as adequate for both language groups.

Cultural involvement and biculturality. To separately assess level of involvement in American and Puerto Rican culture, and to derive a combined biculturality score, participants were administered the Puerto Rican Biculturality Scale (Cortés et al., 1994). This is one of the few scales that assesses cultural involvement and is designed specifically for use with Puerto Ricans. The scale is made up of two parallel 9-item subscales that assess involvement in each of the two cultures. One item, relating to television use and preference, was dropped because Spanish programs were accessible only via privately owned cable television in the neighborhood where the participants lived. Thus, the final American and Puerto Rican subscales were each made up of eight items.

For each subscale, participants were asked to rate their level of cultural involvement on a 4-point (e.g., "How much are American/Puerto Rican values part of your life?") and 5-point rating scale (e.g., "How proud are you of being American/Puerto Rican?"), depending on the specific question. To obtain overall scores on the American and Puerto Rican cultural involvement scales, item responses were averaged. The range of raw scores on American

involvement was 1.13 to 4.25, and 2.38 to 4.63 on Puerto Rican involvement. Participants endorsed a higher involvement in Puerto Rican than American culture, paired $t(54) = 8.77$, $p < .001$.

As anticipated, those participants who responded in English scored significantly higher on the American involvement scale than Spanish participants, $t(52) = 3.7$, $p < .001$. There was also a trend for Spanish participants to score higher on Puerto Rican involvement than English speakers, $t(52) = -1.77$, $p < .10$. Cronbach's alpha coefficients obtained per subscale were adequate and comparable to Cortés et al. (1994; American involvement: $\alpha = .78$; Puerto Rican involvement: $\alpha = .73$). Alpha coefficients obtained by language of administration were adequate for both subscales (see Table 1).

Derivation of biculturalism scores. To obtain a combined biculturalism score, we followed a derivation method developed by Szapocznik et al. (1980). According to this method, biculturalism is conceptualized as occurring on a dimensional continuum, ranging from monoculturalism to biculturalism. First, the American cultural involvement scale was subtracted from the Puerto Rican cultural involvement scale, and the absolute value of this difference was obtained. Following this procedure, those who reported similar levels of involvement in both cultures obtained scores close to 0 (bicultural orientation). As the discrepancy between American and Puerto Rican scores increased, this indicated increasing monoculturalism in either the American or Puerto Rican direction.

However, this procedure did not distinguish between true bicultural and marginal individuals (i.e., lack of involvement in either culture). Therefore, although we did not anticipate that our sample would include marginalized participants, we examined scores across the two subscales to rule out this possibility. No participant obtained a raw score below 2.4 on both scales (a response option of 2 reflected *a little important* and a 3 reflected *fairly important*), suggesting that our sample did not appear to have any truly marginalized participants. Thus, we did not exclude any participants. Finally, for ease of interpretation, the biculturalism scores were reflected so that higher scores indicated higher levels of biculturalism.

Psychological functioning. To assess psychological functioning, five subscales of the revised Symptom Checklist (SCL-90R) by Derogatis (1994) were used. The five subscales were depression, anxiety, somatization, hostility, and interpersonal sensitivity. Participants were read a list of complaints/symptoms and were asked to indicate the degree of discomfort they had experienced in reference to each of these problems in the past 2 weeks. Answers ranged on a 5-point scale from 0 (*not at all*) to 4 (*extremely*). Alpha coefficients for all the five subscales were adequate (range of α s = .71 to .88), and subscale scores, computed by averaging across items, were highly intercorrelated, r range = .47 to .74, all $ps < .001$. Therefore, we averaged the subscale scores to create an index of overall psychological functioning, with higher scores reflecting greater symptomatology.

A comparison of English and Spanish participants revealed a marginally significant difference, with Spanish participants endorsing slightly more symptomatology, $t(44.15) = -1.84$, $p < .10$. This difference was no longer marginally significant when controlling for level of American cultural involvement, suggesting that it was not due to the translation, $F(1, 51) = 2.24$, n.s. Finally, Cronbach's alpha coefficients for this composite were good for the entire sample and for each language group (see Table 1).

Demographic variables. To examine the validity of the language acculturation and cultural involvement measures, we included a number of fixed-format questions that assessed

TABLE 2
Relations Among Language Acculturation, American, Puerto Rican,
and Dual Cultural Involvement, and Symptomatology

	<i>Language Acculturation</i>	<i>American Cultural Involvement</i>	<i>Puerto Rican Culture Involvement</i>	<i>Bicultural Bicultural Bicultural</i>	<i>Symptomatology</i>
Language acculturation	—	.63***	-.16	.32*	-.23†
American cultural involvement		—	.01	.38**	-.15
Puerto Rican cultural involvement			—	.30*	.05
Bicultural				—	-.27*

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

the extent of exposure to the culture of the U.S. mainland, such as generational level, years of schooling, and length of residency in the mainland.

RESULTS

We first present analyses designed to test the external validity of the cultural variables (i.e., language acculturation, American cultural involvement, Puerto Rican cultural involvement, biculturalism). We then present bivariate correlations among the cultural and psychological adjustment variables. Multivariate analyses used to test the two hypotheses about biculturalism and language acculturation are presented next. The analyses comparing relations across language groups are described within each of the two multivariate analyses. Because predictor variables in each of these regressions were intercorrelated (see Table 2), they were centered to avoid problems with multicollinearity. Examination of the variance inflation factors indicated that multicollinearity was not a problem in either of the two regression models (Neter, Wasserman, & Kutner, 1985).

To examine the external validity of the language acculturation and cultural involvement measures, their relations to commonly used demographic indicators of exposure to the U.S. culture were examined. These indicators were generation in the mainland, years of U.S. residency, and schooling. Given that, as expected, these indicators were intercorrelated (r s ranging from .48 to .78, p s $< .001$), both bivariate correlations and (simultaneous) multiple regressions were computed to examine their individual and relative contributions to the prediction of the cultural measures (see Table 3). The results of the bivariate correlations indicated that the three demographic variables were related to all of the cultural variables, except Puerto Rican involvement. Specifically, generation was related to greater language acculturation and American cultural involvement, and years of U.S. residency and schooling were related to greater language acculturation, American involvement, and biculturalism. In the multiple regressions, years of schooling in the United States emerged as the strongest predictor, accounting for variance on language acculturation and American involvement above and beyond that accounted for by the other demographic variables. Taken together, these results provide evidence of the external validity of the acculturation and cultural involvement variables used in the study.

To examine our first hypothesis, that dual cultural involvement would be a stronger predictor of psychological adjustment than involvement in either American or Puerto Rican cul-

TABLE 3
 Summary of Simultaneous Multiple Regressions Predicting Cultural Variables From Demographic Variables

Variable	Language Acculturation			Biculturalism			American Cultural Involvement			Puerto Rican Cultural Involvement		
	R ²	r	β	R ²	r	β	R ²	r	β	R ²	r	β
Generation	.63***	.42**	-.02	.13†	.22	.03	.34***	.34**	.04	.06	-.04	.16
Years of U.S. residency		.67***	.21		.32*	.09		.49***	.12		-.21	-.29
Years of U.S. schooling		.78***	.64***		.36**	.28		.57***	.47**		-.17	-.03

NOTE: Table is a summary of four sets of separate regressions.

† $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 4
Regression Predicting Symptomatology From Monocultural
and Dual Cultural Involvement (N = 54)

	R ² Δ	β <i>In</i>	β <i>Final</i>
Step 1:	.03		
American cultural involvement		-.16	-.04
Puerto Rican cultural involvement		.06	.15
Step 2:	.07*		
Biculturality			-.31*

* $p < .05$.

tural involvement, a hierarchical multiple regression was computed (see Table 4). In the first step of the regression, the two individual cultural involvement variables were entered. Biculturalism was entered in the second step. To explore whether the relation between biculturalism and adjustment differed across the two language groups, language of administration and the multiplicative interaction term between language and biculturalism were entered on Step 3 (data not shown). The interaction between language and biculturalism was not significant, indicating that language of administration did not moderate the relation between biculturalism and adjustment. Thus, the language variable and the interaction term were excluded from the shown regression model.

As predicted, results indicated that biculturalism accounted for a significant amount of variance on psychological adjustment above and beyond that accounted for by the American and Puerto Rican cultural involvement variables, which were not related to adjustment. Thus, a higher level of biculturalism was related to lower levels of symptomatology, and this relation was not different across language groups.

To examine the predictive utility of language acculturation vis-à-vis the role of biculturalism, a separate hierarchical regression predicting psychological adjustment was computed (see Table 5). Biculturalism was entered in the first step of this regression, followed by the language acculturation variable entered in Step 2. To explore whether language group moderated the relations between language acculturation and psychological adjustment, language of administration (coded as 0 = English, 1 = Spanish) and the interaction term for language of administration and language acculturation was entered in Step 3.

As can be seen in Table 5, when entered in the first step of the regression, biculturalism was significantly associated with adjustment, and language acculturation did not account for a significant amount of variance in adjustment above that accounted for by biculturalism. However, language of administration and its interaction with language acculturation, entered in Step 3, accounted for a significant amount of additional variance. Once these variables were also included in the model, biculturalism was no longer significant (final beta). The significant beta for the interaction term indicated that language of administration moderated the relation between language acculturation and psychological adjustment.

To interpret this interaction, we plotted the relations between language acculturation and level of symptomatology, separately for the English and Spanish groups. As can be seen in Figure 1, among the young mothers in the English group, greater levels of language acculturation were related to higher levels of symptomatology. In contrast, among the mothers in the Spanish group, greater levels of language acculturation were related to lower levels of symptomatology. These results suggest that linguistic balance was related to more optimal

TABLE 5
Regression Predicting Symptomatology From Biculturalism
and Language Acculturation ($N = 54$)

	$R^2 \Delta$	β In	β Final
Step 1: Biculturalism	.08*	-.28*	-.10
Step 2: Language acculturation	.02	-.16	.49
Step 3: Language group	.10*		.19
Language Acculturation \times Language Group			-.64*

* $p < .05$.

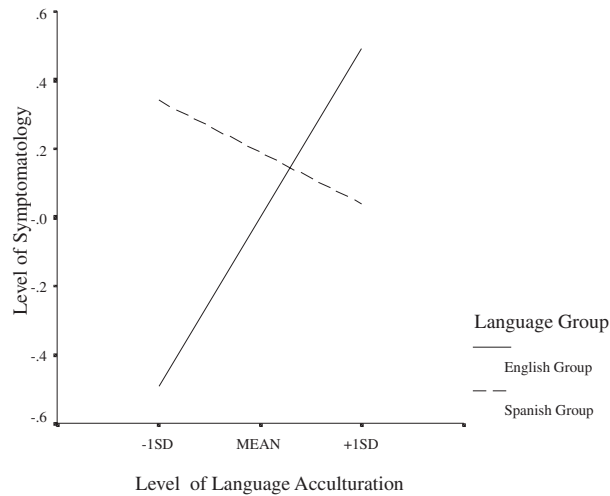


Figure 1: Illustration of Interaction Between Level of Language Acculturation and Language Group

psychological adjustment. Thus, regardless of whether the young mothers' predominant/preferred language was English or Spanish, higher levels of proficiency/use of the other language were related to more optimal psychological adjustment (i.e., greater knowledge of Spanish among those who are highly acculturated and predominantly use/prefer English, greater knowledge of English among those who are relatively unacculturated and predominantly use/prefer Spanish).

DISCUSSION

This is the first study to examine the roles of biculturalism and language acculturation on the psychological adjustment of young mainland Puerto Rican mothers. As expected, biculturalism, or dual cultural involvement, predicted psychological adjustment above what could be predicted by both American and Puerto Rican cultural involvement assessed separately.

Young mothers who reported relatively high levels of involvement in both cultures experienced lower levels of symptomatology than mothers who were primarily involved in only one of these cultures. In addition, the association between biculturalism and psychological adjustment did not differ across the two language groups in our sample. Thus, higher levels of biculturalism were associated with psychological adjustment in a similar way among both the young mothers who were predominantly English speaking and chose to complete the measures in English, and those who were predominantly Spanish speaking and responded to the questionnaires in Spanish. These results for biculturalism lend further support to the proposition that it is the integration of aspects of both the host and original cultures that predicts better psychological functioning among members of ethnic groups in the United States (Berry, 2003; LaFromboise et al., 1993; Miranda & Umhoefer, 1998).

The results of this study also suggest that extent of bilingualism (i.e., the extent to which they know and use both languages across different arenas) is related to positive psychological adjustment among these young mothers. Most important, we found that the relation between language acculturation and psychological adjustment was different across language groups. Specifically, among the young mothers in the English group, greater levels of language acculturation were related to higher levels of symptomatology. In contrast, among the mothers in the Spanish group, greater levels of language acculturation were related to lower levels of symptomatology. Thus, linguistic balance (i.e., greater knowledge of Spanish among those who are highly acculturated and predominantly use/prefer English, and greater knowledge of English among those who are relatively unacculturated and predominantly use/prefer Spanish), or the ability and desire to communicate both in English and Spanish in multiple arenas, was related to more optimal psychological adjustment.

We were also interested in comparing the relative contributions of biculturalism and language acculturation to these young mothers' psychological adjustment. Results of these analyses indicated that, although biculturalism was significantly related to adjustment, when the contributions of both biculturalism and language acculturation were examined together in multivariate analyses, neither biculturalism nor language acculturation accounted for variance on adjustment above and beyond that accounted for by the variables in the model. In contrast, the interaction term for language acculturation and language group emerged as a stronger and unique predictor of adjustment in this analysis. Thus, our results suggest that linguistic balance (i.e., bilingualism) may be more strongly related to psychological adjustment than biculturalism. This seems reasonable because command of the language shared by members of a cultural group is in many respects a prerequisite for cultural involvement in that particular group. In addition, once communication has been established, there can be the further exploration of different cultural values.

Thus, being bicultural, and especially bilingual, may allow young Latina mothers to simultaneously interact with members outside of their cultural group, while still remaining integrated within their families of origin. This integration is particularly important because young Latina mothers rely heavily on their extended family for support (de Anda & Becerra, 1984; Way & Leadbeater, 1999), but as adolescents/young adults, they may also experience additional family conflicts due to intergenerational and acculturational differences among family members (de Anda & Becerra, 1984; Szapocznik et al., 1978). Therefore, biculturalism and bilingualism may be especially important for these young women because, at the same time that they rely on their family for emotional, financial, and child care support, they must also negotiate the developmental tasks of adolescence, such as the development of autonomy, as well as the demands of parenting (e.g., obtain medical services), which may

bring them into contact with mainstream cultural norms and institutions (Contreras et al., 2002).

Bilingualism and biculturalism may also be related to adjustment through their effects on other variables such as feelings of self-efficacy, belonging, and fit with the environment, which in turn are related to greater psychological adjustment. Specifically, the ability to converse and interact in the two languages may increase the young mothers' feelings of self-efficacy, and these feelings may help prevent or decrease symptomatology as the adolescents attempt to cope with the challenges imposed by their new parenting responsibilities. Similarly, the knowledge and endorsement of some values of both cultures may increase the goodness-of-fit between them and the different environments in which they are embedded, thus reducing feelings of loneliness and isolation, which may be correlated with greater adjustment difficulties (Suarez et al., 1997).

Overall, our findings have clear implications for prevention and intervention efforts. As previously suggested by Szapocznik and collaborators for Cuban families with conflictual adolescent-parent relationships (Szapocznik et al., 1986), interventions should focus on helping these young mothers develop greater bilingualism and a bicultural orientation. The findings also suggest that intervention programs must tailor their strategies according to the acculturation level of the mother. In promoting bilingualism/biculturalism, young mainland Latina mothers could be encouraged to choose and enhance specific aspects of both cultures to maximize their mental health and perhaps the well being of their children. For example, depending on their level of acculturation, they might be encouraged to acquire English and to speak it in multiple arenas, which would allow them to successfully interact with members outside of their cultural group and serve as an advocate for their children. Conversely, more acculturated adolescents, who are at increased risk for intergenerational and intercultural conflicts in their families (Szapocznik et al., 1978), could be encouraged to develop or maintain their Spanish language. This would allow them to remain integrated within their families, benefit from the support that they provide (Contreras et al., 1999), and pass this skill on to their children so that they can also reap the benefits of bilingualism/biculturalism.

The strategy of selectively capitalizing on specific elements of culture to maximize mental health may be especially effective for young Latina mothers who are faced with a number of competing demands and forced to navigate between potentially conflicting cultural environments. In this context, a strategy that helps mothers to become flexible and acquire new or expand existing skills could maximize the chances for success. Indeed, past research has shown that promoting biculturalism has helped alleviate conflict between adolescents and their parents (Szapocznik et al., 1986), and families that are bicultural in orientation have been found to be more flexible than families characterized as low in acculturation (Miranda et al., 2000). Furthermore, selective biculturalism has been shown to be very effective for pregnant Mexican American women (Lagana, 2003).

This study also provided further validation of a new biculturalism measure (Cortés et al., 1994; Cortés et al., 2003). The American cultural involvement scale of this measure was significantly predicted by the set of criterion variables included in the study (i.e., generation, years of U.S. residency, years of U.S. schooling). Biculturalism was significantly related to two of these variables, years of U.S. residency and schooling, but together the criterion variables accounted for only a marginally significant amount of variance in biculturalism. It would be important for further studies to validate measures of dual cultural involvement not only with criterion measures that reflect level of exposure to the host culture, such as years of U.S. residency and schooling, but also with measures that ascertain level of exposure or

involvement in the ethnic culture as well (i.e., years of schooling and residency in Puerto Rico). In addition, with regard to the construction of the American and Puerto Rican scales, although still adequate, the internal consistencies of the two subscales of the biculturality measure were lower than those of traditional language acculturation measures. This may be a reflection of the fact that the scales are more heterogeneous in content and assessed more than language use and preference. Nonetheless, the development of more highly reliable measures of biculturality remains an important future goal.

Better methods of ascertaining biculturality also need to be devised because although some researchers suggest that involvement in these cultures should be assessed separately, it is unclear how to integrate these findings once separate analyses have been conducted. Hence, although we agree that it is important to assess participation in each culture separately, we believe that it is also imperative to analyze how the integration of both cultures affects psychological functioning. What our results suggest is that biculturality may be better understood as a type of transcultural process that is better assessed by the combined contribution of dual cultural involvement (Comas-Díaz, 1988). Briefly defined, transculturation is the process whereby a distinct culture is created as a result of contact with two opposing cultures (De Granga, as cited in Comas-Díaz, 1988). For Puerto Rican women, this transcultural strategy may be particularly relevant because they have been seen as the catalyst for cultural change (Comas-Díaz, 1988).

A limitation of our study is its relatively small sample size and therefore low statistical power. Thus, it is important for further studies to replicate these results with other samples of young mainland Puerto Rican mothers. It would also be important to examine whether these results also extend to young Latina mothers of different countries of origin. In further studies, it would also be helpful to obtain across-time assessments of the acculturation process, as a one-time assessment of acculturation/biculturality can only provide a glimpse of this complex process. This is particularly relevant for youth who are, by definition, in a period of flux.

In sum, as the migration of Puerto Ricans to the U.S. mainland continues, acculturation issues will become increasingly salient (Cauce & Domenech-Rodriguez, 2002; García & Montgomery, 1991; Rodriguez, 1989). These demographic changes, along with the many problems that are faced by this community such as poverty, high unemployment, and cultural and linguistic difficulties (Rogler, Cortés, & Malgady, 1994), require that we assess the benefits associated with dual cultural involvement and bilingualism on psychological functioning. In particular, for young Puerto Rican mothers who are at the crossroads of Latino and American cultures and the conveyors of these cultures to their children, the study of these factors would allow for a sensitive exploration not only into their lives but into their children's lives as well.

REFERENCES

- Becerra, R. M., & de Anda, D. (1984). Pregnancy and motherhood among Mexican American adolescents. *Health and Social Work, 9*, 106-123.
- Berry, J. W. (2003). Conceptual approaches to acculturation. In K. M. Chun, P. Balls Organista, & G. Marín (Eds.), *Acculturation: Advances in theory, measurement, and applied research* (pp. 17-38). Washington, DC: American Psychological Association.
- Birnam, D. (1998). Biculturalism and perceived competence of Latino immigrant adolescents. *American Journal of Community Psychology, 26*(3), 335-354.

- Burnam, M. A., Hough, R. L., Karno, M., Escobar, J. I., & Telles, C. A. (1987). Acculturation and lifetime prevalence of psychiatric disorders among Mexican Americans in Los Angeles. *Journal of Health and Social Behavior*, 28, 89-102.
- Cabassa, L. J. (2003). Measuring acculturation: Where we are and where we need to go. *Hispanic Journal of Behavioral Sciences*, 25(2), 127-146.
- Canabal, M. E., & Quiles, J. A. (1995). Acculturation and socioeconomic factors as determinants of depression among Puerto Ricans in the United States. *Social Behavior & Personality*, 23, 235-248.
- Cauce, A. M., & Domenech-Rodriguez, M. (2002). Latino families: Myths and realities. In J. Contreras, K. Kerns, & A. Neal-Barnett (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 3-25). Westport, CT: Praeger.
- Chun, K. M., Balls Organista, P., & Marín, G. (Eds.). (2003). *Acculturation: Advances in theory, measurement, and applied research*. Washington, DC: American Psychological Association.
- Comas-Díaz, L. (1988). Mainland Puerto Rican women: A sociocultural approach. *Journal of Community Psychology*, 16, 21-31.
- Contreras, J. M., López, I. R., Rivera-Mosquera, E., Raymond-Smith, L., & Rothstein, K. (1999). Social support and adjustment among Puerto Rican adolescent mothers: The moderating effect of acculturation. *Journal of Family Psychology*, 13(2), 1-16.
- Contreras, J. M., Narang, D., Ikhlas, M., & Teichman, J. (2002). A conceptual model of the determinants of parenting among Latina adolescent mothers. In J. Contreras, K. Kerns, & A. Neal-Barnett (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 155-177). Westport, CT: Praeger.
- Cortés, D. E., Deren, S., Andía, J., Colón, H., Robles, R., & Kang, S-Y. (2003). The use of the Puerto Rican biculturalism scale with Puerto Rican drug users in New York and Puerto Rico. *Journal of Psychoactive Drugs*, 35(2), 197-207.
- Cortés, D. E., Rogler, L. H., & Malgady, R. G. (1994). Biculturalism among Puerto Rican adults in the United States. *American Journal of Community Psychology*, 5, 707-721.
- Cuéllar, I., Arnold, B., & Maldonado, R. (1995). Acculturation rating scale for Mexican Americans-II: A revision of the original ARSMA scale. *Hispanic Journal of Behavioral Sciences*, 17, 275-304.
- Cuéllar, I., Harris, L. C., & Jasso, R. (1980). An acculturation scale for Mexican American normal and clinical populations. *Hispanic Journal of Behavioral Sciences*, 2, 199-217.
- de Anda, D., & Becerra, R. (1984). Social networks for adolescent mothers. *Social Casework*, 65, 172-181.
- Derogatis, L. R. (1994). *SCL-90R administration, scoring, and procedures manual*. Minneapolis, MN: Author.
- Erkut, S., Szalacha, L. A., García Coll, C. T., & Alarcón, O. (2000). Puerto Rican early adolescents' self-esteem patterns. *Journal of Research on Adolescence*, 10(3), 339-364.
- Feliciano, C. (2001). The benefits of biculturalism: Exposure to immigrant culture and dropping out of school among Asian and Latino youths. *Social Science Quarterly*, 82, 865-879.
- García, J. M., & Montgomery, P. A. (1991). *The Hispanic population in the United States: March 1991* (Current Population Reports, Series p-20, No. 455). Washington, DC: U.S. Census Bureau.
- García Coll, C. T. (1989). The consequences of teenage childbearing in traditional Puerto Rican culture. In J. K. Nugent, B. M. Lester, & T. B. Brazelton (Eds.), *The cultural context of infancy* (pp. 111-132). Norwood, NJ: Ablex.
- García Coll, C. T., Escobar, M., Cebollero, P., & Valcárcel, M. (1989). Adolescent pregnancy and childbearing: Psychosocial consequences during the postpartum period. In C. T. García Coll & M. L. Mattei (Eds.), *The psychosocial development of Puerto Rican women* (pp. 84-114). New York: Praeger.
- García Coll, C. T., & Vázquez García, H. A. (1996). Definitions of competence during adolescence: Lessons from Puerto Rican adolescent mothers. In D. Cicchetti & S. Toth (Eds.), *Rochester symposium on developmental psychopathology: Vol. 7. Adolescence: Opportunities and challenges* (pp. 283-308). Rochester, NY: University of Rochester Press.
- Gil, A., & Vega, W. (1996). Two different worlds: Acculturation stress and personal adjustment among Cuban and Nicaraguan families. *Journal of Social and Personal Relationships*, 13, 435-456.
- Gonzales, N., Knight, G., Morgan-Lopez, A., Saenz, D., & Sirolli, A. (2002). Acculturation and the mental health of Latino youth: An integration and critique of the literature. In J. Contreras, K. Kerns, & A. Neal-Barnett (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 45-74). Westport, CT: Praeger.
- Graves, T. D. (1967). Acculturation, access, and alcohol in a tri-ethnic community. *American Anthropologist*, 69, 306-321.
- Inclán, J. (1983). Psychological symptomatology in second generation Puerto Rican women of three socioeconomic groups. *Journal of Community Psychology*, 11, 334-354.
- Kaplan, M. S., & Marks, G. (1990). Adverse effects of acculturation: Psychological distress among Mexican American young adults. *Social Science Medicine*, 31, 1313-1319.
- LaFromboise, T. D., Coleman, H. L. K., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin*, 114, 395-412.
- Landale, N. S., & Oropesa, R. S. (2002). White, Black, or Puerto Rican? Racial self-identification among mainland and island Puerto Ricans. *Social Forces*, 81(1), 231-254.

- Lagana, K. (2003). Come bien, camina y no se preocupe—Eat right, walk, and do not worry: Selective biculturalism during pregnancy in a Mexican American community. *Journal of Transcultural Nursing, 14*(2), 117-124.
- Miranda, A. O., Estrada, D., & Firpo-Jimenez, M. (2000). Differences in family cohesion, adaptability, and environment among Latino families in dissimilar stages of acculturation. *The Family Journal: Counseling and Therapy for Couples and Families, 8*(4), 341-350.
- Miranda, A. O., & Umhoefer, D. L. (1998). Depression and social interest differences between Latinos in dissimilar acculturation stages. *Journal of Mental Health Counseling, 20*(2), 159-171.
- National Center for Health Statistics. (2002). *National Vital Statistics Reports, 52*(10). Retrieved January 18, 2004, from http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_10.pdf
- Neff, J. A., & Hoppe, S. K. (1993). Race/ethnicity, acculturation, and psychological distress: Fatalism and religiosity as cultural resources. *Journal of Community Psychology, 21*, 3-20.
- Neter, J., Wasserman, W., & Kutner, M. (1985). *Applied linear statistical models* (2nd ed.). Homewood, IL: Irwin.
- Orshan, S. A. (1996). Acculturation, perceived social support, and self-esteem in primigravida Puerto Rican teenagers. *Western Journal of Nursing Research, 18*, 460-473.
- Orshan, S. A. (1999). Acculturation, perceived social support, self-esteem, and pregnancy status among Dominican adolescents. *Health Care for Women International, 20*(3), 245-257.
- Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the study of acculturation. *American Anthropologist, 38*, 149-152.
- Reynoso, T. C., Felice, M. E., & Shragg, G. P. (1993). Does American acculturation affect outcome of Mexican-American teenage pregnancy? *Journal of Adolescent Health, 14*, 257-261.
- Rhodes, J. E., Contreras, J. M., & Mangelsdorf, S. C. (1994). Natural mentor relationships among Latina adolescent mothers: Psychological adjustment, moderating processes, and the role of early parental acceptance. *American Journal of Community Psychology, 22*, 211-227.
- Rodriguez, C. E. (1989). *Puerto Ricans: Born in the U.S.A.* Boulder, CO: Westview Press.
- Rogler, L. H., Cortés, D. E., & Malgady, R. G. (1991). Acculturation and mental health status among Hispanics: Convergence and new directions for research. *American Psychologist, 46*, 585-597.
- Rogler, L. H., Cortés, D. E., & Malgady, R. G. (1994). The mental health relevance of idioms of distress: Anger and perceptions of injustice among New York Puerto Ricans. *Journal of Nervous and Mental Disease, 182*(2), 327-330.
- Rumbaut, R. G. (1994). The crucible within: Ethnic identity, self-esteem, and segmented assimilation among children of immigrants. *International Migration Review, 28*, 748-794.
- Salgado de Snyder, V. N. (1987). Factors associated with acculturative stress and depressive symptomatology among married Mexican immigrant women. *Psychology of Women Quarterly, 11*, 475-488.
- Soto, E., & Shaver, P. (1982). Sex-role traditionalism, assertiveness, and symptoms of Puerto Rican women living in the United States. *Hispanic Journal of Behavioral Sciences, 4*, 1-19.
- Suarez, S. A., Fowers, B., Garwood, C. S., & Szapocznik, J. (1997). Biculturalism, differentness, loneliness, and alienation in Hispanic college students. *Hispanic Journal of Behavioral Sciences, 19*, 489-505.
- Szapocznik, J., & Kurtines, W. M. (1980). Acculturation, biculturalism and adjustment among Cuban Americans. In A. M. Padilla (Ed.), *Acculturation: Theory, models and some new findings* (pp. 139-159). Boulder, CO: Westview Press.
- Szapocznik, J., Kurtines, W. M., & Fernandez, T. (1980). Bicultural involvement and adjustment in Hispanic American youths. *International Journal of Intercultural Relations, 4*, 151-165.
- Szapocznik, J., Rio, A., Perez-Vidal, A., Kurtines, W. M., Hervis, O., & Santisteban, D. (1986). Bicultural effectiveness training (BET): An experimental test of an intervention modality for families experiencing intergenerational/intercultural conflict. *Hispanic Journal of Behavioral Sciences, 8*, 303-330.
- Szapocznik, J., Scopetta, M. A., Kurtines, W. M., & de los Angeles Aranalde, M. (1978). Theory and measurement of acculturation. *Interamerican Journal of Psychology, 12*, 113-130.
- Torres-Matrullo, C. M. (1976). Acculturation and psychopathology among Puerto Rican women in mainland United States. *American Journal of Orthopsychiatry, 46*, 710-719.
- Way, N., & Leadbeater, B. J. (1999). Pathways toward educational achievement among African American and Puerto Rican adolescent mothers: Reexamining the role of social support from families. *Development and Psychopathology, 11*, 349-364.
- Zambrana, R. E., Scrimshaw, S. C. M., Collins, N., & Dunkel-Schetter, C. (1997). Prenatal health behaviors and psychosocial risk factors in pregnant women of Mexican origin: The role of acculturation. *American Journal of Public Health, 87*(6), 1022-1026.

Irene R. López is a Bronx-born Puerto Rican graduate student who will soon graduate with a doctorate in clinical psychology from Kent State University in Ohio. She has currently accepted a postdoctorate position with the Family Research Consortium, which is an NIMH-funded position aimed to assess the effect of acculturation on psychological functioning. She will soon be in residence at Rutgers' University, New Jersey. Her

research interests concern the intersection of anthropology and psychology and address such issues as psychological acculturation, phenotype, and racial and ethnic identity among Latino/as.

Josefina M. Contreras is an assistant professor of clinical psychology at Kent State University. She received her Ph.D. in clinical and developmental psychology from the University of Illinois at Chicago. Her research interests include the study of parenting and its relations to social and emotional development in young children, with special interest in the roles culture and context play in these processes. Her research focuses on normative aspects of parent-child relationships as well as factors influencing parenting and child outcomes among adolescent Latina mothers.