Acculturation Risk and Protective Factors and Mental Health Symptoms

In Immigrant Latino Adolescents

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Abstract

The aim of this investigation was to map factors that predicted internalizing, externalizing, social, and total behavioral problems in immigrant Latino adolescents. Interviews were conducted with 100 foreign-born Latino adolescents. Multiple regression analyses revealed two risk factors, perceived discrimination and parent-adolescent conflict, which were significant predictors of adolescent internalizing, externalizing, and total problems. Interaction terms indicated that adolescents who were highly involved in Latino culture and who experienced high parent-adolescent conflict were at risk for internalizing problems. Familism was a protective factor associated with lower levels of internalizing and total problems. However, the effect of familism was mediated by parent-adolescent conflict.
Background

Immigrants from Latin America have contributed significantly to the rapidly changing demographic picture in the United States and are currently the fastest growing sociodemographic group in the nation (Gil, Wagner, & Vega, 2000). In 2000, the United States Census Bureau counted 35.3 million Latino people, comprising 12.5% of the population (U.S. Census Bureau, 2001a). According to the U.S. Census in 2002, nearly 67% of the nation’s Latinos were of Mexican origin, 14% were from Central and South American countries, 8.6% were Puerto Rican, 3.7% were Cuban, and 6.5% were of other Latino origins (U.S. Census Bureau, 2003b). In 2003, the U.S. Census Bureau announced that Latinos had surpassed African Americans as the largest ethnic minority group in the nation (U.S. Census Bureau, 2003a).

In 2000, 77% of the Latino population (27.1 million people) lived in seven states that each had Latino populations of one million or more (U.S. Census Bureau, 2001a). These states were California, Texas, New York, Florida, Illinois, Arizona, and New Jersey. Most of what is known about Latino acculturation and mental health comes from research conducted in these areas. However, the influence of the Latino population is widening and strongly impacting geographic areas that have not been traditional immigration enclaves. From 1990 to 2000, seven states saw their Latino populations increase by 200% or more. At least twenty-five other states saw increases between 60 and 199 percent. North Carolina is one of the seven states where the Latino population burgeoned during the past decade, increasing nearly 400% from 76,726 individuals in 1990, to 378,963 individuals in 2000. With an increase of 655%, Mexican immigrants were the largest subgroup driving this trend in North Carolina. In contrast, North Carolina’s overall rate of population growth during the same period showed only a 15% increase (U.S. Census Bureau, 2001a).
Latinos are more likely than non-Latinos to be under 18 years of age. In 2002, 34.4% of Latinos were under age 18 while 22.8% of non-Latinos were in this age range (Ramirez & de La Cruz, 2003). During 2002, of the estimated 378,063 Latinos residing in North Carolina, 120,090 were children under the age of 18 years (Annie E. Casey Foundation, 2003). Considering the fact that 40% of the Latino population in the United States is foreign born and 52% of this foreign-born group entered the country between 1990 and 2002 (Ramirez & de La Cruz, 2003), it is reasonable to assume that many Latino youths are still adjusting to life in this country.

We know little about how immigration has influenced this fast-growing group of minority youths (Suarez-Orozco & Suarez-Orozco, 2001). National data reveal disturbing trends for this group, indicating that Latino adolescents engage in high levels of several risky biopsychosocial behaviors that are related to negative long-term consequences for health and well-being. According to the Centers for Disease Control’s (CDC) Youth Risk Behavior Surveillance System (YRBSS) Latino adolescents report high levels of internalizing mental health symptoms. In 2003, nearly one-quarter (23.4%) of Latinas reported seriously considering suicide, and over one in ten (15%) had attempted suicide at least one time in the past twelve months (CDC, 2004). These percentages for Latinas were significantly higher than percentages reported by boys or girls of any other ethnic or racial group (CDC, 2004). Such internalizing symptoms as well as aggression, and risk-taking behaviors may be driven by feelings of depression and hopelessness. In the 2003 YRBSS data, 45% of Latinas and 26% of Latino boys reported feeling sad or hopeless almost every day for two weeks or longer in the past twelve months. These percentages were significantly higher than those reported by African American or non-Latino White high school students (CDC, 2004).
We have little understanding of what is driving these symptoms in Latino youth generally and in new immigrant youth in particular. It is likely that stress related to acculturation processes may play a significant role. Using a risk and protective factor framework, we examine the roles high and low levels of acculturation, perceived discrimination, and family processes play in predicting social problems, externalizing, internalizing, and total problem scores on the Youth Self-Report (Achenbach, 1991).

Acculturation: Risk or Protection?

*Acculturation* is a macro-level process in which cultural change results from contact between two autonomous and independent cultural groups (Redfield, Linton & Herskovits, 1936). Usually, the nondominant group is strongly influenced to take on norms, values, and behaviors espoused by the dominant group (Berry, 1998). Assimilation has traditionally been seen as the end point to this process. An individual has become assimilated when she or he has given up their culture of origin identity in order to identify with the dominant culture. Traditionally, this was thought to be a linear process in which one steadily gave up more and more of one’s culture of origin and replaced it with the language, norms, and values of the host culture. Yet, in recent years, research has suggested that the goal of assimilation for new immigrants may be problematic and, that in fact, both high and low levels of acculturation may produce undesirable results.

Many authors have hypothesized and tested links between acculturation levels and social maladjustment, psychopathology, and substance use (Al-Issa & Tousignant, 1997; Delgado, 1998; Gil, Vega, & Dimas, 1994; Miranda, Estrada & Firpo-Jimenez, 2000; Szapocznik & Kurtines, 1980). In comparison to less acculturated peers, more acculturated Latinos display higher levels of alcohol use, less consumption of balanced, healthy meals, and more consumption
of marijuana, cocaine or both (Amaro, Whitaker, Cofman & Heeren, 1990; Goel, McCarthy, Phillips, & Wee, 2004; Marks, Garcia & Solts, 1990; Vega, Kolody, et al., 1998). Studying the link between acculturation and delinquent behavior in a sample of 1,843 Cuban boys and girls, Vega, Gil, Warheit, Zimmerman, and Apospori (1993) found a significant association between problems inherent in the acculturation process and lower self-esteem. Further, language conflicts, often considered a proxy measure of acculturation, had a significant interaction with teacher derogation and peer drug use. This association between acculturation factors and delinquent behavior was stronger than the impact of family variables had on delinquent behavior. Ebin et al. (2001) found a similar pattern between acculturation levels and problem behavior in a sample of 609 Latino adolescents reporting a positive association between high acculturation and problem behaviors and a negative association between high acculturation and health-promoting behaviors.

Researchers have also linked low acculturation levels with psychological difficulties such as depression, social withdrawal, familial isolation, despair, hostility, and anxiety (Escobar et al., 1986; Miranda, Estrada & Firpo-Jimenez, 2000; Szapocznik & Kurtines, 1980; Torres-Matrello, 1976). Low acculturated individuals may feel cut off from the host culture, experiencing their environment as frightening, confusing, and overwhelming (Rogler et al., 1991).

**Discrimination as a risk factor**

An important, yet often overlooked, factor is the impact of discrimination on acculturating individuals. The receptivity of the dominant group in welcoming or stigmatizing the nondominant group may be a powerful predictor of how stressful and difficult the acculturation experience may be for immigrants (de Anda 1984; Berry, 1998). New immigrants in the United States face a cultural context in which race and ethnicity can be threats to positive
development. In contrast to racial and ethnic minorities that have resided in this country for generations, new immigrants may be unprepared for discriminatory attitudes found in the host culture because they come from countries with more homogenous populations. Stress related to racism has been associated with a variety of negative health and well-being outcomes (Harrell, 2000). However, as with acculturation, the majority of research has been with adults. The adult research supports the idea that one major resource for coping with discrimination is through “intra-group” support that often includes mentoring and modeling around ways to cope with various forms of racism (Harrell, 2000). However, new immigrants may not have these supports if they are moving to areas in which ethnic enclaves are not well established. This situation may make children and adolescents particularly vulnerable since their parents have limited supports for, or experience in, dealing with racism.

Vega, Gil et al. (1993) found that perceived discrimination had an influence on self-esteem in youth. Depressive symptoms have also been linked to acculturation and discrimination in Mexican American youth (Romero & Roberts, 2003). In this study, stressors related to living in a bicultural context were compared for both U.S.-born and immigrant youth. Lower self-esteem and higher numbers of stressors, including various types of discrimination, predicted depressive symptoms (Romero & Roberts, 2003).

Familism

Immigration is a life event that poses challenges and opportunities to the adult family members who choose to immigrate, however their children are not often included in the decision to immigrate (Suarez-Orozco & Suarez-Orozco, 2001). The adjustment to life in a new country involves negotiating a new language, new norms, and new relationships. This task of reconciling differences between the culture of origin and the dominant culture is particularly salient for new
immigrant youth and their parents. Familism is a deeply ingrained sense of being rooted in the family. The term refers to “attitudes, behaviors, and family structures within an extended family system and is believed to be the most important factor influencing the lives of Latinos” (Cooley, 2001, p. 130). Many scholars view this strong sense of family orientation, obligation, and cohesion as a potentially protective quality for Latino youth (Vega, 1995). For example, Cooley (2001) found familism to be an important deterrent to child maltreatment in both Latino and non-Latino families. Gil, Wagner, and Vega (2000) reported familism to have a highly significant, negative association with acculturation stress – particularly for new immigrant youth. Familism had an indirect protective effect on alcohol involvement by decreasing the youth’s disposition to deviance.

Yet familism, while protective, appears to be easily eroded by the acculturation experience. Gil, Vega, and Dimas (1994) examined acculturation and adjustment in an ethnically diverse sample of 6,670 middle school students in Dade County, Florida. They found that perceived intergenerational acculturation gaps between parents and children increased as acculturation levels rose. Both highly acculturated foreign-born and U.S.-born students were equally likely to report low family pride. Among foreign-born students, higher acculturation dramatically decreased family pride. In a study of Puerto Rican families living in New York City, levels of familism were negatively associated with education and were positively associated with age at arrival in the United States, again suggesting that a potentially important protective factor is threatened by living in a host culture (Cortes, 1995). Rogler and Cooney (1984) also found that second generation adult children are less familistic than their first generation parents.
Taken together, this literature suggests a complex interplay between the experience of acculturation, family functioning, discrimination, and mental health status. The current study addresses these acculturation risk and protective factors in detail by examining direct, mediating, and moderating effects on mental health symptoms in a sample of Latino immigrant adolescents living in rural and urban areas of North Carolina. The Latino population has burgeoned in North Carolina and little is known about the adjustment processes that these immigrant adolescents experience.

Methods

Research design

This investigation was part of the Parent-Teen Biculturalism Project, a youth violence and suicide prevention research program for Latino immigrant adolescents funded by the U.S. Centers for Disease Control and Prevention. In-depth interviews were conducted with Latino immigrant adolescents and their parents. Active consent to participate was obtained from both parents and adolescents before the interviews took place. Interview questions focused on the acculturation process, discrimination experiences, familism, and parent-child conflict. The study included outcome measures of mental health symptoms.

Sample

The convenience sample included 100 Latino adolescents: All were born outside of the United States and had lived in the United States for 10 years or less. This inclusion criterion was used to maximize the chances that adolescents were still immersed in the acculturation process. Adolescents had to be between the ages of 12 and 18 years to be eligible to participate. Sixty-three percent of the adolescents who participated were from Mexico, 14% were from Central America, 1% was from the Caribbean, and 22% were from South America. Table 1 presents
demographic characteristics of the sample participants. Adolescents had lived in the United States for an average of 4 years (range 1 month to 10 years). Fifty-four percent were female. The average age was 15 years (range 12 to 18 years), 70% of the adolescents lived with two parents, and 91% currently attended school. The average annual household income reported by Latino parents who participated was $24,000. Family incomes ranged from $1,200 to $90,000 per year, indicating that the sample represented families from a wide array of income levels.

Community-based sampling was accomplished by recruiting participants at community events, as well as receiving referrals from social service and juvenile justice agencies. In the later part of data collection, interviewers specifically tried to recruit adolescents who were at higher risk for problematic behaviors. This targeted sampling of Latino adolescents was done to maximize the range of risk levels in the sample. Table 1 shows that this strategy was effective, as evidenced by total problems scores on the Youth Self Report ranging from 3 to 111. Based on their self-reports, 25% of Latino immigrant youth were classified in the borderline or clinical range for internalizing and externalizing problems. Approximately 30% of the sample was classified in the borderline or clinical range for total problems.

**Independent Variables**

Analyses of the sample were conducted using measures of seven independent variables: gender, English language use, involvement in Latino and non-Latino cultures, perceived discrimination, familism, and parent-child conflict.

1. *Gender* was a dichotomous variable with females coded 1 and males coded 0.

2. *English language use* was used as a proxy measure for acculturation level. One interview item asked participants “What language do you prefer to speak?” with response
categories “English all of the time”, “English most of the time”, “Spanish and English equally”, “Spanish most of the time”, or “Spanish all the time”.

3. *Involvement in Latino and non-Latino cultures* was measured using the Bicultural Involvement Questionnaire (BIQ). The BIQ has 33 items, measuring language, food, recreation, and media use on a 5-point Likert scale, is self-administered, and has acceptable psychometric qualities (Szapnocznik, Kurtines, & Fernandez, 1980). Instead of utilizing the typical Latino-to-Anglo Likert scale anchors employed by many other acculturation instruments, the BIQ scales separate questions into Latino and non-Latino categories and Likert anchors go from “Not at all” to “Very much”. There are two subscales: involvement in Latino culture and involvement in the host culture. Internal consistency reliability was reported to be .79 for the entire BIQ; .93 for the Latino subscale, and .89 for the non-Latino subscale (Szapnocznik, Kurtines, & Fernandez, 1980). In this sample of 100 immigrant adolescents, internal consistency reliability was .77 for the entire BIQ; .89 for the Latino involvement subscale, and .91 for the non-Latino involvement subscale.

4. *Perceived discrimination* was a 5-item scale with an internal consistency reliability of .68. The scale’s items were: How often do people dislike you because you are Latin? How often are you treated unfairly because you are Latin? How often have you seen friends treated unfairly because they are Latin? How often has it been hard for you to get along with others because you do not speak English well? How often has it been hard for you to get good grades because of problems understanding English? This scale has been used in prior acculturation research (Vega, Gil, Warheit, Zimmerman, & Apospori, 1993; Vega, Zimmerman, Warheit, Apospori, & Gil, 1993; Vega, Zimmerman, Khoury, Gil, & Warheit, 1995; Vega, Kolody, Aguilar-Gaxiola, Alderete, Catalano, R. & Caraveo-Anduaga, J., 1998).
5. *Familism* was assessed using seven items that were assessed on a 5-point Likert scale. The items assessed included a) family members respect one another; b) we share similar values and beliefs as a family; c) things work out well for us as a family; d) we really do trust and confide in each other; e) family members feel loyal to the family; f) we are proud of our family; and g) we can express our feelings with our family. Gill, Wagner, and Vega (2000) reported that this scale’s internal consistency reliability is .87. In this sample, the internal consistency reliability was .90.

6. *Parent-adolescent conflict* was assessed using the Conflict Behavior Questionnaire-20 (CBQ-20; Robin & Foster, 1989). This scale provides an overall measure of negative communication conflict within a parent-adolescent dyad. The CBQ-20 has 20 items that use a yes-no response format to assess positive and negative interactive behaviors that occur in both non-conflictual and argumentative exchanges. This instrument distinguishes distressed from non-distressed families. The CBQ-20 has been judged to have good clinical utility as an easily administered intervention and evaluation instrument (Rush et al., 2000). The internal consistency reliability for the Conflict Behavior Questionnaire-20 in this sample was .89.

**Dependent Measures**

Dependent measures were collected from adolescents using the Youth Self-Report (YSR; Achenbach, 1991). The YSR is divided into 118 problem items that are assessed using a 3-point Likert scale (less than average, average, more than average). Adding YSR items yielded continuous subscales that served as the dependent measures for this investigation. Subscales measured: *internalizing problems, social problems, externalizing behavior problems, and total problems*. Although the primary focus of the investigation was on internalizing mental health symptoms, scales for externalizing and total problems were included to examine how risk and
protective factors influence different types of outcomes. The YSR has an internal consistency reliability of .95 for total problems, and test-retest reliability of .79-.80 (Rush et al., 2000). The YSR has been widely used with Latino youth (e.g., Vega, Zimmerman, Khoury, et al., 1995). In our sample, the internal consistency reliability was .89 for internalizing problems; .62 for social problems; .89 for externalizing behavior problems; and .93 for total problems.

Data Analyses

To examine simple acculturation associations, language preference was used to place adolescents into groups. Adolescents who reported speaking a) Spanish all or most of the time were compared to those who reported b) using Spanish and English equally, and with adolescents who spoke c) English all or most of the time. One-way ANOVA was used to examine differences between these subgroups on demographic variables, Latino and non-Latino cultural involvement, and the YSR dependent measures.

Following examination of bivariate correlations, independent variables were entered into linear regression models in blocks. Gender was entered first, followed by involvement in Latino and non-Latino cultures, perceived discrimination, familism, and parent-child conflict. This stepwise approach allowed for examination of mediation processes in the data (Baron, & Kenny, 1986). After direct and mediation effects were investigated, moderation effects were assessed by entering interaction terms in the regression models. Interactions between Latino involvement, non-Latino involvement, parent-child conflict, familism, and discrimination were entered into the regression models. Because interaction terms can introduce problematic levels of multicollinearity into regression equations, creating high variance inflation factors and low tolerances, all of the continuous variables were centered by taking the difference between observed scores and the grand mean before calculating interaction terms (Neter, Kutner,
Nachtsheim & Wasserman, 1996; Tabachnick & Fidell, 2001). This procedure lowered collinearity, rendering acceptable variance inflation factors and tolerance diagnostics. Only significant interaction terms were retained in the final regression models.

Results

As illustrated in Table 1, the majority of the immigrant adolescents (n = 56) preferred equal use of Spanish and English. Thirty-three adolescents preferred speaking Spanish all or most of the time, and only ten adolescents reported speaking English all or most of the time. Examining subgroups based on language preference revealed that immigrant adolescents who preferred using Spanish all or most of the time were significantly older than bilingual adolescents or those who preferred English (F (3, 99) = 3.7, p < .05). Adolescents who preferred speaking English all or most of the time had lived in the United States significantly longer than bilingual or Spanish dominant speakers (F (3, 99) = 9.9, p < .001). These English-dominant adolescents also came from families with annual incomes that were nearly double the average incomes for bilingual or Spanish-dominant adolescents (F (3, 99) = 12.2, p < .001) and they reported significantly less involvement in Latino culture (F (3, 99) = 19.4, p < .001). Each of these language preference groups had a significantly different average involvement in non-Latino culture, revealing a linear trend—adolescents preferring Spanish reported the lowest involvement in non-Latino culture and adolescents preferring English reported the highest levels of involvement in non-Latino culture (F (3, 99) = 19.7, p < .001). There were no statistically significant differences between the three language preference groups on YSR behavioral outcomes.

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The majority of Latino immigrant adolescents preferred equal use of Spanish and English: One possible indication of biculturalism. Figure 1 illustrates the apparent predominance of biculturalism in the sample by plotting the Bicultural Involvement Questionnaire subscales against one another. Most adolescent reports fall in the upper quadrant that signifies high levels of both Latino cultural involvement and non-Latino cultural involvement. Only 4% of the sample falls in the assimilation quadrant characterized by high non-Latino involvement and low Latino cultural involvement. This is further evidence that adolescents are becoming bicultural rather than simply assimilating into U.S. culture.

Overall, the independent variables were not highly intercorrelated. The highest correlations were found between language use and the cultural involvement scales (Latino involvement -- r = .496, p < .001; non-Latino involvement -- r = -.543, p < .001), meaning that adolescents highly involved in Latino culture preferred speaking Spanish and those highly involved in non-Latino culture preferred English. There were statistically significant, negative correlations between familism and parent-child conflict (r = -.448, p < .01), and between Latino cultural involvement and non-Latino cultural involvement (r = -.441, p < .01). The latter correlation is enigmatic because so many adolescents appear to be bicultural. However, the association may be heavily influenced by a substantial subgroup of lower acculturated youth who report high Latino cultural involvement and low non-Latino cultural involvement. Perceived discrimination displayed a significant positive correlation with Latino cultural involvement (r = .267, p < .01) and a significant negative correlation with non-Latino cultural involvement (r = -.221, p < .01), indicating that low-acculturated adolescents tended to report more discrimination experiences.
Table 2 shows correlations between independent variables and YSR outcomes. Language use was the only independent variable that was not significantly associated with YSR outcomes. Consequently, it was not used in multivariate models. Latino and non-Latino cultural involvement were considered stronger measures of acculturation processes because these variables were highly correlated with language use, and were significantly correlated with YSR outcomes. Parent-child conflict, perceived discrimination, and familism displayed the highest correlations with YSR outcomes.

**Multivariate Modeling**

Standardized regression coefficients for hierarchical multiple regression models are shown in Table 3. Independent variables were entered into linear regression models in blocks or steps in the order shown in the table. A mediation effect was identified for variables that were significant upon initial entry into the model, but became non-significant when a subsequent variable was entered into the model.

**Direct effects** Compared to males, Latinas reported higher levels of anxiety/depression behaviors ($\beta = .262, p < .01$), affective problems ($\beta = .213, p < .01$), and internalizing problems ($\beta = .187, p < .05$). Involvement in Latino culture was positively associated with anxiety/depression behaviors ($\beta = .238, p < .05$) and internalizing problems ($\beta = .201, p < .05$).

Perceived discrimination and parent-adolescent conflict had the strongest and widest-ranging effects. Perceived discrimination had a statistically significant direct effect on social problems, internalizing problems, externalizing problems, and total problems (Betas are as
follows: social problems .278, p < .01, internalizing .213, externalizing .208, and total problems .218, all p < .05). Parent-adolescent conflict was the strongest risk factor, displaying a statistically significant direct effect on all of the YSR mental health outcomes (Betas are as follows: social problems .241, p < .05, internalizing problems .303, all p’s < .01, externalizing problems .519, and total problems .515, all p values were < .001).

Mediation effects The association between perceived discrimination and both anxious/depressed behavior and affective problems was mediated by familism. Perceived discrimination was a statistically significant predictor of these two outcomes until familism was entered into the models.

Familism was a significant protective factor, associated with decreases in withdrawn/depressed behaviors, affective problems, social problems, internalizing problems, and total problems. The familism effect was reduced to insignificance when parent-adolescent conflict was entered into the models. Thus, the associations between familism and these outcomes were mediated by parent-adolescent conflict.

Moderation effects Interaction terms between Latino involvement, non-Latino involvement, parent-child conflict, familism, and perceived discrimination were entered into the regression models. All variables were mean-centered before multiplying the interaction term in order to reduce multicollinearity. Only three interaction terms were statistically significant predictors in the models. There was a statistically significant interaction between involvement in Latino culture and parent-adolescent conflict for internalizing problems. Adolescents with higher levels of Latino cultural involvement who also had higher levels of parent-adolescent conflict reported the most internalizing problems (β = .269, p < .01). Thus, parent-adolescent conflict moderated the impact of Latino cultural involvement on internalizing problems. Figure 1
Acculturation Risk and Protective Factors

provides a visual example of these moderation effects. The Latino cultural involvement and parent-adolescent conflict scales were dichotomized using a mean split and graphed to show the combined effect of high Latino cultural involvement and high parent-adolescent conflict on internalizing problems.

These models with direct, mediation, and moderation effects were highly significant in predicting YSR mental health outcomes. Model F-tests were always statistically significant at the p < .01 level or smaller. Adjusted R² statistics indicated that the independent variables explained approximately 40% of the variance in internalizing problems. Eighteen percent of the variance was explained for social problems. For externalizing and total problems, 30% of the variance was explained by two significant risk factors: perceived discrimination and parent-adolescent conflict.

Discussion

These findings extend the literature on how acculturation risk and protective factors are associated with well-being in immigrant Latino youth. In addition, this analysis highlights the ways in which experiences that are unique to particular cultural groups combine to elevate risk for or protect against mental health symptoms.

Acculturation

Unlike previous research (e.g., Al-Issa & Tousignant, 1997; Delgado, 1998; Gil, Vega, & Dimas, 1994; Miranda, Estrada & Firpo-Jimenez, 2000), we did not find evidence that high acculturation was a strong risk factor. There was more evidence for viewing low levels of acculturation as a risk factor because Latino cultural involvement without non-Latino cultural involvement was positively associated with internalizing problems in general. Taken together,
these direct effects indicate that immigrant Latino adolescents with high investment in Latino culture and low investment in non-Latino culture (e.g., low acculturated adolescents shown in the “separation” quadrant in Figure 1) appear to experience more internalizing problems, at least in the short run. This is in line with previous research which linked low acculturation levels with depression and anxiety (Escobar et al., 1986; Miranda, Estrada & Firpo-Jimenez, 2000; Szapocznik & Kurtines, 1980; Torres-Matrello, 1976). Overall, acculturation stressors, such as discrimination and parent-adolescent conflict, displayed stronger effects than measures of cultural involvement.

**Discrimination**

Perceived discrimination had strong direct effects on internalizing, externalizing, and total problem scores. Of all the variables tested, discrimination had the strongest impact on social problems. These findings support previous work linking discrimination experiences to self-derogation (Vega, Gil, Warheit, Zimmerman, & Apospori, 1993; Vega, Zimmerman, Warheit, Apospori, & Gil, 1993) and depression (Romero & Roberts, 2003) and extend this work by showing how pervasive the impact of discrimination is for immigrant Latino adolescents across a variety of outcome domains. However, our results indicating the severity and pervasiveness of discrimination as a risk factor contradict previous reports showing the impact of discrimination is more severe for U.S.-born than for immigrant (foreign born) Latino adolescents (Gil & Vega, 1996; Gil, Wagner & Vega, 2000; U.S. DHHS, 2001; Vega & Gil, 1998). Immigrant youth, compared to highly assimilated U.S.-born adolescents, were thought to be protected by culture of origin values and behaviors, such as familism. In our data, however, familism did not mediate the impact of discrimination on the outcomes of interest. Discrimination was still strongly predictive of a range of negative outcomes.
Experiencing discrimination is one of the most adverse elements in the acculturation process. It is commonly thought that negative health behaviors, such as alcohol and substance use, may be used as a strategy for coping with acculturation stress (Gil, Wagner & Vega, 2000). Maladaptive behavior is thought to derive from “increased perceptions of discrimination, internalization of minority status, and/or socialization into cultural attitudes and behaviors that have a disintegrative effect on family ties” (Gil, Vega & Dimas, 1994, p. 45). This results in self-deprecation, ethnic self-hatred, and a weakened ego structure in the acculturated individual (Rogler, Cortes & Malgady, 1991). This raises additional questions as to how Latino parents can help their new immigrant children understand and cope with discrimination, and should prompt service providers to discuss discriminatory experiences and coping methods a regular part of work with new immigrant youth.

Familism and parent-adolescent conflict

Family interactions, in the form of familism and parent-adolescent conflict, were the strongest predictors of adolescent mental health symptoms. What is occurring in the immigrant family appears to mediate or transcend the importance of cultural involvement and discrimination experiences. High levels of conflict between parents and youth undermine any protection offered by familism. Parent-adolescent conflict mediated the relationship between familism and mental health symptoms and had the strongest association with all outcomes except adolescent social problems.

Of particular interest is the significant moderation effect found between Latino cultural involvement and parent-adolescent conflict for internalizing problems: This has not been reported in previous acculturation research. Youth who were highly involved in Latino culture and at odds with their parents were at the highest risk for internalizing problems. Previous
research has linked low acculturation levels with depression, social withdrawal, familial isolation, and anxiety (Escobar et al., 1986; Miranda, Estrada & Firpo-Jimenez, 2000; Rogler et al., 1991; Szapocznik & Kurtines, 1980; Torres-Matrello, 1976). Our findings support this association, but further show that low acculturated adolescents in conflict with their parents are at particular risk. They may feel cut off from the host culture while at the same time feeling distant from their parents. The conflict with parents may cut adolescents off from one critical source of Latino cultural involvement (e.g., Latino family interactions), making these low acculturated adolescents feel alone, isolated, and overwhelmed. It is understandable that internalizing mental health problems may be the result.

A final finding relates to measurement. Our analysis highlights the importance of considering measures beyond language use to consider one’s level of acculturation. Language use dropped out of our models as a predictor very early on while other descriptions of acculturation level that took into account the youth’s preferences and attitudes appear to have higher predictive value.

Implications for practice and policy

Social workers and psychologists need to pay more attention to the deleterious effects that discrimination has on immigrant Latino families and should advocate for policies and programs that decrease interpersonal and institutional discrimination. Prevention and intervention program designers should specifically target discrimination and parent-adolescent conflict in programs for Latino immigrant families. Discrimination resistance skills and family communication enhancement are viable intervention components and warrant further integration into practice.
Taken together, these findings support the importance of working with new immigrant youth in a family context. Using a risk and protective factor framework for prevention intervention (Fraser, Kirby, & Smokowski, 2004; Smokowski, 1998), social workers and psychologists should attempt to decrease the impact of discrimination and parent-adolescent conflict while increasing the protective influence of familism. This recommendation is in line with the development of family-oriented cultural skills training programs (Bacallao & Smokowski, 2005; Coatsworth, Pantin, & Szapocznik, 2002; Szapocznik, Santisteban, Kurtines, Perez-Vidal, & Hervis, 1984, 1986; Szapocznik, Santisteban, Rio, et al., 1989). These programs help immigrant parents and adolescents to practice coping with discrimination, address areas of familial conflict, decrease assimilation stress, and heighten bicultural competencies. This applied intervention work directly relates to the basic research findings presented in this paper.

Limitations

The most serious limitation of this study is also one of its strengths. The unique sampling frame providing previously unknown information about acculturation processes in Latino immigrant families in North Carolina limited the investigation’s generalizability to immigrant Latinos beyond this geographical area. Caution is warranted in applying the results in other contexts. While a range of Latino subgroups were represented that roughly paralleled national proportions, the sample was too small to compare differences among immigrants from different countries of origin. Finally, only cross-sectional data from Latino adolescents was available for this study. This analysis represents a snapshot of these youth at a particular point in their acculturation process. It is unknown whether the youth that appear to be bicultural are actually bicultural or moving toward a high acculturation level in which they will give up their culture of origin. Likewise, those youth who appear to be less acculturated may look significantly different
in coming years. Future investigations should include longitudinal data from multiple reporters. That work is currently underway.

Conclusions

Practitioners and policy makers interested in the mental health and well-being of immigrant Latino adolescents should address institutional and interpersonal discrimination and help to decrease parent-adolescent conflict. At the same time, maintaining familism and developing bicultural competencies serve as protective factors in lowering the chances of developing problematic mental health symptoms.
References


Table 1: Parent-Teen Biculturalism Project Interview Sample (N= 100)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Full Sample (N = 100)</th>
<th>Spanish all or most of the time (n = 33)</th>
<th>English and Spanish equally (n = 56)</th>
<th>English all or most of the time (n= 10)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender of Adolescent (% Female)</td>
<td>54%</td>
<td>64%</td>
<td>50%</td>
<td>40%</td>
<td>1.2</td>
</tr>
<tr>
<td>Average Age</td>
<td>15</td>
<td>15.7</td>
<td>14.7</td>
<td>14.6</td>
<td>3.7*</td>
</tr>
<tr>
<td>Currently in School</td>
<td>91%</td>
<td>91%</td>
<td>91%</td>
<td>90%</td>
<td>.006</td>
</tr>
<tr>
<td>Time Adolescent has lived in United States.</td>
<td>4 years (2.45)</td>
<td>3.9</td>
<td>3.5</td>
<td>7.0</td>
<td>9.9***</td>
</tr>
<tr>
<td>Yearly Family Income (average)</td>
<td>$24,000 ($14,353)</td>
<td>$20,075</td>
<td>$22,760</td>
<td>$43,742</td>
<td>12.2***</td>
</tr>
<tr>
<td>Adolescent’s involvement in Latino culture</td>
<td>3.8 (.63)</td>
<td>4.1</td>
<td>3.8</td>
<td>2.9</td>
<td>19.4***</td>
</tr>
<tr>
<td></td>
<td>(1.65 – 5.0)</td>
<td></td>
<td></td>
<td></td>
<td>English different</td>
</tr>
<tr>
<td>Adolescent’s involvement in non-Latino culture</td>
<td>3.2 (.69)</td>
<td>2.8</td>
<td>3.4</td>
<td>4.0</td>
<td>19.7***</td>
</tr>
<tr>
<td></td>
<td>(1.3 – 4.7)</td>
<td></td>
<td></td>
<td></td>
<td>all different</td>
</tr>
<tr>
<td>YSR Internalizing problems (average)</td>
<td>11 (8.5)</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>(range 0 – 42)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YSR Externalizing problems (average)</td>
<td>12 (8.8)</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>(range 0 – 39)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YSR Total problems (average)</td>
<td>39 (22)</td>
<td>36</td>
<td>41</td>
<td>43</td>
<td>.54</td>
</tr>
<tr>
<td></td>
<td>(range 3 – 111)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Pearson Correlations between Independent and Dependent Variables

<table>
<thead>
<tr>
<th></th>
<th>YSR social problems total score</th>
<th>YSR internalizing problems total score</th>
<th>YSR externalizing problems total score</th>
<th>YSR total problems score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender of adolescent</td>
<td>.065</td>
<td>.253*</td>
<td>-.191</td>
<td>-.015</td>
</tr>
<tr>
<td>Latino Cultural Involvement</td>
<td>.031</td>
<td>.291**</td>
<td>-.191</td>
<td>-.003</td>
</tr>
<tr>
<td>Non-Latino Cultural Involvement</td>
<td>-.023</td>
<td>-.241*</td>
<td>-.032</td>
<td>-.095</td>
</tr>
<tr>
<td>Language Use (English-to-Spanish)</td>
<td>-.044</td>
<td>.060</td>
<td>-.037</td>
<td>-.057</td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>.378**</td>
<td>.346**</td>
<td>.253*</td>
<td>.300**</td>
</tr>
<tr>
<td>Familism</td>
<td>-.248*</td>
<td>-.293**</td>
<td>-.166</td>
<td>-.290**</td>
</tr>
<tr>
<td>Parent-Adolescent Conflict</td>
<td>.356**</td>
<td>.452**</td>
<td>.518**</td>
<td>.543**</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
Table 3: Standardized Regression Coefficients for Multivariate Models Predicting Adolescent YSR Mental Health Symptoms

<table>
<thead>
<tr>
<th></th>
<th>Social Problems</th>
<th>Internalizing Problems</th>
<th>Externalizing Problems</th>
<th>Total Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.056</td>
<td>.187*</td>
<td>-.151</td>
<td>.011</td>
</tr>
<tr>
<td>Involvement in Latino Culture</td>
<td>-</td>
<td>.201*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Involvement in Non-Latino Culture</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Discrimination</td>
<td>.278**</td>
<td>.213*</td>
<td>.208*</td>
<td>.218*</td>
</tr>
<tr>
<td>Familism</td>
<td>-.099a</td>
<td>-.058a</td>
<td>.083</td>
<td>-.011a</td>
</tr>
<tr>
<td>Parent-Adolescent conflict</td>
<td>.241*</td>
<td>.303**</td>
<td>.519***</td>
<td>.515***</td>
</tr>
<tr>
<td>Latino involvement x parent-adolescent conflict interaction</td>
<td>-</td>
<td>.269**</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-Latino involvement x parent-adolescent conflict interaction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Model F</td>
<td>5.54**</td>
<td>9.37***</td>
<td>9.42***</td>
<td>11.51***</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.18</td>
<td>.40</td>
<td>.30</td>
<td>.33</td>
</tr>
</tbody>
</table>

* p < .05, ** p < .01, *** p < .001

a = The impact of familism was mediated by parent-adolescent conflict.
Figure 1: Acculturation in Latino Immigrant Adolescents (N = 100)
Figure 2: Estimated Marginal Means of YSR Internalizing Symptoms

Estimated Marginal Means

Latino involvement - high or low (mean split)

Parent-Adolescent Conflict - high or low (mean split)
- Low parent-child conflict
- High parent child conflict