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Nativity Status and Depressive Symptoms among Hispanic Young Adults: The Role of Stress Exposure

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Abstract

Objective—This article documents nativity differentials in depressive symptoms among Hispanics during their initial years of adulthood and explores how ethnicity, socio-demographic characteristics, and exposure to stressful life events and changes in social roles help to explain those differentials.

Methods—Data is drawn from a large-scale two-wave community study of stress, psychiatric well-being, and substance use disorders among young adults. Our analytic sample includes 553 Hispanic respondents and we employ multivariate regression techniques.

Results—Regardless of age at immigration, foreign-born women experience greater declines in depressive symptoms than native-born women during early adulthood. This advantage is explained by differences in perceptions of discrimination, family-based stress, and social role changes. The association between nativity and depressive symptoms is not conditioned by ethnicity, but ethnicity does condition the association between stressful events and depressive symptoms.

Conclusions—The findings suggest that mental health treatment and prevention efforts should focus more heavily on stress exposure.

INTRODUCTION

The United States' population is becoming ever more diverse. Today, immigration accounts for more than one third of the nation's total observed annual demographic increase and the foreign-born population is currently hovering at a little over 34 million (Camarota, 2004). The growth of the foreign-born portion of our society is particularly striking among the young. Immigrant school-aged children are now the fastest growing and most ethnically diverse segment of our nation's child population (Schmidley, 2000) and immigrants make up a substantial portion of U.S. residents in their early adult years (U.S. Census Bureau, 2003). Unlike the turn of the 20th century, when the majority of immigrants came from Europe and were racially identified as White, the preponderance of immigrants coming to the United States today were born in Latin America or in Asia. As a result, Hispanics now make up the largest racial/ethnic minority group, with over 14 percent of the total U.S. population reporting a Hispanic ethnicity (U.S. Census Bureau, 2006). It is estimated that at least 40 percent of the Hispanic population is foreign-born (Schmidley, 2000) and over 56 percent is under the age of 30 (U.S. Census Bureau, 2004). As such, it has become increasingly important that we understand the adaptation and well-being of young Hispanic immigrants

and their children. The future of our society will be influenced by the adequacy with which these young people adapt to and function within our society.

Research on the psychological well-being of immigrants has tended to focus either on young children or on adults as a whole, without distinguishing variations in adult life-stages or between those who largely grew up in the U.S. and those who were raised elsewhere. As a result, the effects of nativity, life stage, time spent in the U.S., and childhood socialization contexts on the psychological adaptation of immigrants have not been effectively disentangled.

In an effort to contribute in this regard, we use two waves of data from the Miami-Dade area of South Florida to focus on the depression outcomes of young Hispanic adults, all of whom had lived in U.S. throughout their entire adolescence. Our analyses address the following questions: (1) How does nativity affect depressive symptoms among Hispanic youth during the early adult period?; (2) How is the relationship between nativity and depressive symptoms influenced by socio-demographic and ethnic background factors?; and (3) How does exposure to stressful life events and changes in social roles help to explain the linkage between nativity and depressive symptoms among young Hispanic men and women?

BACKGROUND

Assimilation and Psychological Well-Being

The processes by which the foreign-born assimilate to life in the United States, as well as the relevance of such for psychological health have received considerable research attention (Portes and Rumbaut, 1996; Rumbaut, 1996; Sowell, 1981; Warner and Srole, 1945). Warner and Srole's (1945) "straightline assimilation" theory has often been used to explain changes in the ethnic identification, behavior, social outcomes, and emotional and mental health outcomes of immigrants. This model proposes that the social and economic outcomes of immigrants are expected to be poorer than those of their native-born peers because of the higher levels of trauma and stress that they experience, as well as the social, economic, and linguistic disadvantages associated with the immigration process.

Most of the early work on immigrant psychological health asserted that immigrants initially experience negative effects on their well-being, but as they become more accustomed to their new society and assimilate to its values and culture those negative effects fade away (Sowell, 1981; Warner and Srole, 1945). Recent re-examinations of past studies, however, have shown that nativity differences in the psychological outcomes of European-Americans may have been an artifact of socio-demographic disadvantages (Portes and Rumbaut, 1996). Moreover, research concerning post-1965 immigrants indicates that the straight-line theory of assimilation may have little utility in explaining the health patterns of today's immigrant populations.

In fact, a growing number of studies provide evidence for an intriguing immigrant psychological health paradox. Foreign-born individuals are more likely than the native-born to suffer socio-economic disadvantage, to have experienced the loss of social supports, and to face stresses associated with the acculturation process. Given these characteristics, one would expect immigrants to be at greater risk for poor psychological outcomes relative to their native-born counterparts (Turner and Avison, 2003; Turner et al., 1995; Vega et al., 1998). Yet, examinations of contemporary immigrants generally indicate that there are either no differences between the foreign-born and native-born populations in terms of psychological health or that there exists an immigrant *advantage* (Alegría et al., 2007; Burnam et al., 1987; Crosnoe, 2006; Eisenbruch, 1988; Harker, 2001; Harris, 1999;

Scribner, 1996; Shrout et al., 1992; Takeuchi et al., 2007; Vega and Rumbaut, 1991; Vega et al., 1998; Williams et al., 2007).

Very little research, however, has focused specifically on the psychological well-being of immigrants who came to the U.S. as children and are now in the early stages of adulthood. We know that immigrant children tend to report lower levels of depression, higher levels of positive well-being, higher levels of self-esteem, and lower levels of drug and alcohol use than non-immigrant children of similar socio-demographic backgrounds (e.g. Crosnoe, 2006; Eisenbruch, 1988; Harker, 2001; Harris, 1999). One recent study has also indicated that lower levels of drug dependence may persist for foreign-born Hispanic women throughout their late teens and into their early twenties (Turner et al., 2006). While this is suggestive of an enduring foreign-born “advantage” in well-being, we do not yet know whether foreign-born individuals who were raised and educated in the U.S. will remain advantaged in the more affective aspects of psychological health throughout their early adult years, or if their outcomes will, over time, come to resemble those of their native-born peers. In addition to outcome differences by nativity status, we speculate that there may be important differences among foreign-born adults depending upon both current age and whether they spent a significant portion of their childhood in the U.S.

Psychological Well-being and Stress Exposure during Early Adulthood

We conceptualize psychological well-being as the product of a health trajectory that begins during childhood and progresses through each subsequent life stage (Ge et al., 1994). Throughout life, an individual's experiences build upon each other, affecting and directing his/her overall health trajectory (Elder, 1998). The literature on human development suggests that the early adult years can be a difficult time for the psychological well-being of young people, as they are facing a wide variety of changes in their social roles and relationships and their awareness and contact with the world outside of their home or neighborhood (Ge et al., 1994, 2001; Wichstrom, 1999).

How young people are able to traverse this period has important consequences for their well-being throughout the remainder of their adult years. For example, depressive disorders during adolescence and early adulthood appear to shape social and cognitive functioning (Puig-Antich et al., 1993) and to have long-term negative effects on mental health outcomes (Kaltiala-Heino et al., 2001; Rao et al., 1993). When depression is disruptive to the acquisition of educational credentials or social skills that are typically developed during the early adult years, it can also have long-term negative effects on socio-economic status and family formation behaviors (Kaltiala-Heino et al., 2001). Because mental health during the early adult years appears to be so crucial for later outcomes, it is important to know whether there are nativity differences in the ability of youth to maintain positive mental health throughout this period.

The “stress process model,” which is increasingly used to understand the mechanisms underlying health disparities, proposes that the life conditions to which individuals are subjected are largely defined by their social positions in society, such as their nativity, ethnicity, gender, and socioeconomic status (Billings and Moos, 1982; Kohn, 1969, 1972; Pearlin, 1989; Pearlin et al., 1981; Turner et al., 2006). Differences in social position tend to translate into differential exposure to major and traumatic experiences, which in turn can lead to health disparities (Turner et al., 1995). The utility of this model has been strongly supported by research that has shown that stress exposure accounts for a significant portion of observed differences in depressive symptoms and depressive/anxiety disorders (Turner and Lloyd, 1999; Turner and Lloyd, 2004).

Thus, the association between a status, such as nativity, and depression likely arises, at least in part, from group-level variations in exposure to stress. Past research has suggested that foreign-born Hispanics in the U.S. may experience lower levels of cumulative lifetime stress exposure than native-born Hispanics (Burnam et al., 1987; Scribner, 1996; Turner et al., 2006; Vega et al., 1998). While this may prove protective for the foreign-born in general, little is known about nativity differences in exposure to stress that occurs specifically within the early adult years and how this exposure might affect trajectories of psychological health outcomes. On the one hand, we speculate that this time period may be especially difficult for the foreign-born, as they are increasingly required to contend with differences between their immigrant upbringing and the norms and expectations of the larger, non-immigrant society (García Coll and Magnuson, 1997). On the other hand, immigrant families and communities may be more likely to provide youth with social support and protect them from exposure to stressful experiences and life changes (Escobar, 1998; Fernández-Kelly and Schauffler, 1994; Ostir et al., 2003).

The goal of this study is to examine whether there are significant nativity differences among young adults in terms of both cumulative and recent exposure to stress. In particular, we investigate variations in lifetime exposure to potentially traumatic events and discriminatory treatment, as well as recent exposure to stressful events and changes in the family relationships and social roles most salient to young adults (e.g. changes in the roles of student, employee, spouse and parent). We also examine the extent to which nativity differences in these factors explain the association between nativity status and depression outcomes during the early adult years. Because previous research has consistently indicated higher rates of depression among young women than men (e.g. Hankin et al., 1998; Kessler et al., 1993; Maughan, 2002) and it has been suggested that women are more likely than men to develop depression in response to many kinds of stressful life events (Kessler and McLeod, 1984; Maciejewski et al., 2001; Maughan, 2002), we also explore the possibility that the mechanisms underlying the association of nativity with depression symptoms will be conditioned by gender.

METHODOLOGY

Data

The data are drawn from a large-scale two-wave community study of stress, psychiatric well-being, and substance use disorders among young adults, conducted in the Miami-Dade area of South Florida. The first wave of data collection, conducted between 1998 and 2000, included approximately 1,800 respondents between the ages of 18 and 23 who had lived in the U.S. since at least the 6th/7th grade. The study sample consists of approximately 25 percent Cuban-origin respondents, 25 percent “other Hispanics”, 25 percent African Americans and 25 percent non-Hispanic Whites. This sample distribution roughly corresponded to the racial/ethnic distribution of young people in the Miami-Dade area, and analyses indicate that the sample is reasonably representative of the population from which it was drawn (Turner et al., 2006). The second wave of data collection, conducted approximately two years later, included interview follow-ups with just over 1,200 wave one respondents. A more detailed description of the sample and the study field procedures have been outlined in previous works (Turner and Avison, 2003; Turner et al., 2004). We utilize data from those participants of self-identified Hispanic origin who completed interviews at both waves one and two (n=553). Since preliminary analyses revealed a significant imbalance in the socioeconomic status distribution by gender and race/ethnicity, we applied weights to all present analyses to adjust for the use of this sub-sample.

These data are highly appropriate for the purposes of this paper for two reasons. First, the data collected include detailed information on both lifetime cumulative stress exposure and

exposure to more recent life changes and stressors, allowing for a nuanced assessment of the connection between stress and depressive symptoms during the early adult years. Second, the study population is ethnically diverse and contains a high proportion of foreign-born individuals. This allows for a detailed examination of ethnic and nativity variations in risk for depression.

Measures

Depressive Symptoms—Depressive symptoms were assessed at both waves one and two using the Center for Epidemiologic Studies Depression Scale (CES-D), a highly reliable and widely used measure of depressive symptoms (Radloff, 1977). Scores range from 0 to 60, with a weighted sample mean of 13.34 at wave one ($\alpha=0.88$) and 10.49 at wave two ($\alpha=0.87$).ⁱ

Nativity—Respondents are classified according to their country of birth and, for those who were born outside of the United States, the age at which they immigrated to this country. Respondents are classified as either: native-born (57.3 percent); foreign-born, immigrated before age six (19.2 percent); and foreign-born, immigrated at age six or older (23.3 percent).

Socio-demographic Characteristics—All socio-demographic characteristics are measured at wave one. Age is measured in years and has a sample mean of 19.9. Gender is measured by the respondents' self-identification as either “male” (53 percent) or “female” (47 percent). Ethnicity is measured by the respondents' self-reported ethnic background. Respondents are categorized as: Cuban (48 percent); Nicaraguan (17 percent); or “other” Hispanic (35 percent).ⁱⁱ We assess socioeconomic status (SES) during the respondents' childhood using a composite score that considers parents' occupational level (Hollingshead 1957), education, and income. Scores on these three status dimensions were standardized, summed and divided by the number of these for which information was provided. Scores range from -2.14 to 2.17 , with a sample mean of -0.08 . We also include measures of family structure during adolescence and current living arrangement. Family structure during adolescence (i.e. middle/high school) is categorized as: two biological parent family (60 percent); stepfamily (15 percent); single mother family (22 percent); or “other” family (5 percent). Respondents' current living arrangement is categorized as living with a partner/spouse (23 percent) or living in any other arrangement (77 percent).ⁱⁱⁱ

Cumulative Stress Exposure—A Life History Calendar (LHC) based on that developed by Freedman et al. (1988) was employed at wave one to obtain retrospective information on the respondents' past experience of major stressful events and traumas. Our measure of

ⁱCronbach's alpha tests reveal that our measure of depressive symptoms is highly reliable at both waves one and two (0.88 and 0.87, respectively). In addition, the reliability of these measures remains consistently high even when the sample is broken down by nativity status (α ranging between 0.84 and 0.89 at wave one, 0.84 and 0.88 at wave two), ethnic background (α ranging between 0.84 and 0.89 at wave one, 0.86 and 0.88 at wave two), and English language ability (α ranging between 0.76 and 0.88 at wave one, 0.87 and 0.89 at wave two).

ⁱⁱRespondents categorized as “other” Hispanics hail from a wide variety of ethnic backgrounds. Approximately 8 percent of this group reports that they are Colombian, 8 percent Mexican, 5 percent Dominican, and 5 percent Puerto Rican. The remainder reports either an “other” Central/South American background (35 percent), a combination of two different Hispanic backgrounds (22 percent), or simply indicates that they are a Hispanic individual from the U.S. (12 percent). The position of Puerto Ricans living in the U.S., particularly those who were born on the island of Puerto Rico, is unique. Because individuals born in Puerto Rico hold U.S. citizenship from birth, their migration experience is often quite different from that of other immigrants. The number of Puerto Ricans in our sample, however, is very small ($n=11$) and the presence of this group does not alter the findings of our analyses (results of analyses that exclude Puerto Ricans available upon request). Throughout this study, therefore, we consider individuals born in Puerto Rico to be “foreign-born” and those born in the U.S. to be “native-born.”

ⁱⁱⁱPreliminary analyses made additional distinctions among those in “other” living arrangements, separately examining those who lived alone, who lived with parents, who lived with other relatives, and who lived with roommates. Making these additional distinctions did not alter the findings substantively or add significantly to the explanatory power of the models.

lifetime stressful events is a count of the number of different stressful events or traumas experienced prior to wave one (e.g. ever failed a grade in school, ever kicked out of the house, ever forced to live apart from one or both parents, ever had a child who died, ever been shot at, etc.). This measure has an observed range of zero to twenty-one events and a sample mean of 3.95.

We also measured respondents' perceptions of day-to-day discrimination and major discrimination events at wave one. Day-to-day discrimination is indexed by the mean of nine items that tap into how often respondents believe they are treated more negatively than others (e.g. treated with less courtesy than others, called names or insulted, harassed, etc.). This measure ranges from 1 ("never") to 5 ("almost always") and has a sample mean of 1.68. Major discrimination is assessed by a count of the number of different situations in which respondents believe that they have been discriminated against and have faced serious social and/or economic consequences (e.g. unfairly fired or denied a promotion, not been hired for unfair reasons, treated unfairly by the police, etc.). This measure ranges from zero to seven and a sample mean of 0.94.

Recent Stress Exposure—We examine reports of stressful events that have occurred within the past twelve months (as measured at wave two) and construct a recent stressful life events index. The index serves as a count of the number of different events experienced by the respondent or someone close to them (e.g. a serious accident or injury, death of a child or partner, trouble with the law, an unwanted pregnancy, a major financial crisis, a break-in or a robbery, etc.), and has a range of zero to thirty-three and a sample mean of 2.47. We also examine change in level of family stress between the waves of data collection. To assess family-related stress we create mean-item indices of family stress from six questions asked at both waves (e.g. you often feel that your family makes too many demands on you, often points out mistakes you have made, always tells you what to do and how to act, etc.). The original questions were ordinal in nature, with response categories ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Change in family stress is measured as the difference between the wave one and wave two measures, ranges in value from -4 to 4, and has a sample mean of -0.16.

Young Adult Roles and Role Changes—Using data from both waves, we examine the stability of respondents' engagement in several social roles that are particularly salient during the early adult years. Changes in the major social roles held during early adulthood could be viewed as either positive or negative, depending upon the particular role change. However, change in and of itself may be experienced as stressful and may place a young person at increased risk for poor psychological health. Engagement in the role of student is categorized as: attending school at both waves one and two (39 percent); not attending school at either wave (30 percent); starting school between the waves (10 percent); quitting school between the waves (12 percent); and graduating from school between the waves (10 percent). Engagement in the role of employee is categorized as: employed at both waves (62 percent); not employed at either wave (9 percent); starting employment between the waves (17 percent); stopping employment between the waves due to job loss (2 percent); and stopping employment between the waves due to other causes (10 percent). Engagement in the role of spouse is categorized as: married at both waves (7 percent); never married at both waves (80 percent); divorced/separated at both waves (2 percent); became married between the waves (7 percent); and became divorced/separated between the waves (4 percent). Engagement in the role of parent is categorized as: parent at both waves (7 percent); not a parent at either wave (85 percent); and change in parent status between the waves (8 percent).

Analytic procedures

The multivariate analyses employ ordinary least squares (OLS) regression techniques. We first examine nativity differences in depressive symptoms at wave two, controlling for depressive symptoms at wave one. We next explore how the relationship between nativity and change in depressive symptoms is influenced by socio-demographic and ethnic background factors. Finally, we examine the extent to which lifetime stress exposure, exposure to recent stressful life events and relationships, and recent social role changes (e.g. student, employee, spouse, and parental roles) may help to explain nativity differences in depressive symptoms. Using Chow tests, we also directly examine whether the specific mechanisms underlying the effects of nativity may vary by gender. Given the results of these tests, we find it appropriate to conduct all analyses separately by gender.

DESCRIPTIVE RESULTS

The analytic sample includes 553 young adult respondents of Hispanic background who had completed interviews at both waves one and two. Of these respondents, 317 (57.3 percent) were native-born, 106 (19.2 percent) were foreign-born and had immigrated before the age of six, and 129 (23.3 percent) were foreign-born and had immigrated at age six or later. The average respondent was approximately 20 years of age at wave one (see Table 1).

Table 1 provides means for and assesses nativity differences in depressive symptoms and socio-demographic factors for both male and female respondents. Regardless of nativity status or gender, respondents reported significantly lower levels of depressive symptoms at wave two than at wave one. Although past research has shown that depressive symptoms generally peak during late adolescence and decline over the next several decades (e.g. Maughan, 2002), our findings suggest that for this young Hispanic population the initial decline in symptoms during the early twenties may be fairly steep. On average, respondents reported a 21.4 percent drop in their depressive symptoms score within the span of only two years. Thus, while the very early adult years (i.e. ages 19–20) may be hard on the psychological well-being of young people, within a short period of time they appear to be finding ways to better manage and overcome the factors that lead to heightened levels of depressive symptoms. Overall, these data offer no suggestion of nativity differences in risk for depression among males. Foreign-born females, on the other hand, appear to be advantaged relative to those who are native-born, although the differences observed are only statistically significant at wave two. These results indicate that the immigrant paradox with respect to depressive symptoms may apply within our female Hispanic population.

It is important to note that nativity status is significantly associated with age, childhood SES and, as a result of varying immigration patterns across national origins, ethnic background (See Table 1). Chi-square tests for differences among means indicate that the foreign-born tend to be older, to have experienced lower childhood SES, and to be of different ethnic backgrounds than their native-born peers. Respondents in the native-born and the “foreign-born/before age 6” (henceforth referred to as FBLT6) categories are more likely to be Cuban, while those in the “foreign-born/age six or later” (henceforth referred to as FB6+) category are more likely to be of Nicaraguan and “other” Hispanic background. To control for the possible confounding influences of these variables, we include measures of them in all multivariate analyses.

Because the findings in Table 1 indicate that there is little in the way of a difference in depressive symptoms to be explained among the male respondents, our subsequent analyses are limited to females. Table 2 shows that the stress exposure and role changes faced by young Hispanic women differ by nativity status in several important ways. In terms of stress exposure, the foreign-born report significantly fewer lifetime stressful events (particularly

those in the FBLT6 category), less frequent experiences with day-to-day discrimination/unfair treatment, and fewer recent stressful events than do native-born respondents. No significant nativity differences are observed with respect to perceptions of major discriminatory events and changes in family stress, and few are observed with respect to the measures of social roles and role changes. We do find, however, significant nativity differences in respondents' engagement in the student role. While native-born women are no more likely than foreign-born women to report being out of school at both waves one and two, foreign-born women are more likely to be attending school at both times. This appears to stem from the fact that foreign-born women are less likely to have either quit school or to have graduated from school between the waves than are their native-born counterparts. Overall, the findings suggest that young women of foreign birth, especially those who immigrated while very young, may receive some psychological health advantages in terms of their exposure to stress and the social role changes they experience during their early adult years. The role that these factors play in explaining the lower levels of depressive symptoms seen among foreign-born women at wave two is further examined in the multivariate analyses.

MULTIVARIATE RESULTS

OLS regression analyses were conducted to estimate depressive symptoms at wave two, controlling for depressive symptoms measured at wave one. Table 3 presents the results of these analyses applied to our sample of young Hispanic women.

Model 1 reveals substantial stability in depressive symptoms over the two-year period between waves of data collection. Yet, being of FBLT6 status, as opposed to native-born status, is associated with significantly larger declines in depressive symptoms over that time. Once basic socio-demographic characteristics are held constant in Model 2, we see that *both* FBLT6 and FB6+ status are associated with significantly larger declines in symptoms. Thus, as was suggested in our descriptive analysis, being foreign-born appears to be protective of psychological well-being among young Hispanic women, regardless of the age at which they immigrate. Model 2 also indicates that, holding background characteristics constant, both Nicaraguan and "other" Hispanic females are significantly less likely than their Cuban counterparts to experience declines in their depressive symptom scores during early adulthood. In fact, while youth's depressive symptom scores decline on average, Nicaraguan and "other" Hispanics are more likely than their Cuban peers to experience an increase in their depressive symptoms during this time. Similarly, compared to their counterparts who were raised by two biological parents, young women who were raised in an "other" family structure are more likely to experience an increase in symptoms. It is important to note, however, that these findings are net of nativity status. Given that Nicaraguans, "other" Hispanics, and youth living in "other" family structures are disproportionately found among the foreign-born, who tend to experience significantly larger declines in depressive symptoms than their native-born peers, the average respondent who is Nicaraguan, "other" Hispanic, or who was raised in an "other" family structure does not report an increase in psychological distress over time.

The possibility that differences in cumulative stress exposure, recent stress exposure, and social role changes may underlie the association between nativity status and depressive symptoms is explored in Models 3 through 5. Model 3 indicates that perceptions of day-to-day experiences of discrimination are positively associated with increases in depressive symptoms.^{iv} The inclusion of this cumulative stress measure accounts for (mediates) approximately 20 percent of the advantage observed for the FBLT6 group in Model 2 ($[-3.56 - -2.85]/-3.56 = 19.94$) and 22 percent of the advantage observed for the FB6+ group in Model 2 ($[-3.35 - -2.61]/-3.35 = 22.09$). Model 4 shows that recent stressful life

events and recent changes in level of family stress are also significant predictors of increased depressive symptoms. Together, these two measures account for about 20 percent of the advantage associated with the FBLT6 group and a striking 42 percent of the advantage associated with the FB6+ group. Finally, Model 5 confirms the significance of two social roles during early adulthood: the student role and the spousal role.^v Young women who are not engaged in the student role at either wave of data collection and those who have recently quit school without graduating report significantly greater increases in depressive symptoms than do young women who are continuously engaged in the student role. On the other hand, young women who are not engaged in the role of spouse at either wave report significantly greater decreases in depressive symptoms over time than do young women who are continuously married. The inclusion of these measures in Model 5 accounts for 18 percent of the FB6+ advantage, but only 5 percent of the FBLT6 advantage. The final model shown in Table 3 incorporates all of the stress exposure and social role measures. Together these measures reduce the effects associated with nativity status to non-significance, however only day-to-day discrimination, recent changes in family stress and recently quitting school retain significant independent effects on the outcome. Overall, we have accounted for a substantial portion of the advantage that foreign-born women hold over their native-born peers of similar socio-demographic characteristics: almost 38 percent of the FBLT6 advantage and 64 percent of the FB6+ advantage ($([-3.56 - -2.22]/-3.56=37.64)$ and $([-3.35 - -1.22]/-3.35=63.58)$, respectively).

Tests for interactions revealed very little in the way of conditional relationships. We found no evidence of an ethnicity-by-nativity interaction, which suggests that the association between nativity status and depressive symptoms is relatively similar for Cuban, Nicaraguan and “other” Hispanic women during early adulthood. We did find, however, a significant ethnicity-by-recent life events interaction. Figure 1 presents the conditional association.

As the figure shows, the depressive symptoms of young women of Nicaraguan and “other” Hispanic descent appear to be relatively unaffected by their recent exposure to stressful events. For young Cuban women, on the other hand, exposure to recent stressors is positively associated with the risk of increased depressive symptoms. At low levels of exposure to recent stressful events, Cuban women face an advantage relative to their non-Cuban counterparts. Yet, this advantage declines with increasing stress exposure, such that, at high levels of exposure, risk for increased depressive symptoms is lower among Nicaraguans and Other Hispanics. This regression slope differential indicates that there may be important differences in the social contexts experienced by young Cuban and non-Cuban women living in South Florida. Non-Cuban women may have access to more effective social supports or resources that help to buffer the negative effects associated with exposure to very high numbers of stressful life events. At the same time, it is important to consider that the average respondent, regardless of ethnicity, reports a small number of stressful events. As such, the vast majority of respondents fall within the range of exposure associated with a Cuban advantage.

Future research should aim to better isolate the factors that may be protecting young Cuban women who are exposed to normative levels of stressful life events. We believe part of this

^{iv}Neither accumulated lifetime stressful events nor perceptions of major discriminatory events are associated with the change in depressive symptoms, and including the measures for these variables does not improve the fit of the models. Therefore, we do not present them in the models shown on Table 3. The lack of association between major past stressors (which occurred prior to wave one) and current depressive symptoms most likely stems from the fact that our model controls for wave one depressive symptoms and, as a result, has already captured much of the long-term effects of past stressors upon respondents' psychological well-being.

^vThe roles of employee and parent were also examined in regression analyses. However, the measures for these roles were never statistically significant and did not improve the fit of the multivariate models. Therefore, the results of these analyses are not shown on Table 3.

protection may be derived from the fact that these women are living within a well-established, self-sustaining ethnic enclave that can help to foster the psychological and material well-being of Cuban immigrants and their families (Bratter and Eschbach, 2005; Ostir et al., 2003). Nicaraguans and “other” Hispanics who are living in the Miami area may be surrounded by many other individuals of Hispanic descent, yet they do not necessarily benefit from the kinds of every-day supports and protections provided to Cubans through strong co-ethnic networks and social solidarity. Whether non-Cuban Hispanics reap benefits from their location within or near the Cuban enclave, and whether they have access to smaller parallel ethnic enclaves of their own, are questions that remain to be answered.

In sum, these findings suggest that, regardless of the age at immigration, foreign-birth is associated with more positive mental health outcomes among young Hispanic women. Foreign-born women experience significantly greater declines in depression during their late teens and early twenties than do their native-born peers of similar socio-demographic backgrounds. This advantage can be explained by aspects of both cumulative and recent stress exposure, including perceptions of day-to-day discrimination and recent changes in family-based stress, as well as nativity differences in the likelihood of quitting school prior to degree completion. Ethnic background does not condition the association between nativity and depressive symptoms, but does seem to condition the association between recent stressful events and depressive symptoms.

DISCUSSION

The findings of this study allow us to better understand the relationship between nativity status and depressive symptoms among an understudied, but quickly growing, segment of our population – young Hispanics in their late teens and early twenties, who have spent all or much of their childhood being raised in the United States. In line with the findings of previous research (e.g. Alegría et al., 2007; Crosnoe, 2006; Harker, 2001; Harris, 1999; Scribner, 1996; Shrout et al., 1992; Vega et al., 1998; Williams et al., 2007), which has largely focused on either younger or older immigrant populations than we do here, our findings indicate that foreign-born young adults do not report poorer psychological well-being than the native-born. In fact, while foreign-born young men report depression outcomes similar to their native-born peers, foreign-born young women actually experience an “immigrant advantage.” Although no significant nativity differences are found in their reports of depressive symptoms at wave one (when respondents are 18 to 23 years of age), we discover that foreign-born women experience a significantly greater drop in depression over the next couple of years than do native-born women. Thus, compared to their native-born peers of similar socio-demographic backgrounds, young Hispanic women of foreign-birth appear to more successfully weather the early years of the transition to adulthood.

In contrast to some previous research that suggests that the immigrant advantage may disappear over time as young people adapt to U.S. culture (e.g. Eisenbruch, 1988; Harris, 1999), we find that age at immigration does not condition the effects of nativity status on the depression trajectories of Hispanic women during the early adult years. Controlling for basic socio-demographic characteristics, the results indicate that foreign-born women tend to experience an advantage over their native-born peers, regardless of their age at arrival. This advantage appears to stem largely from differential exposure to an accumulation of both long-term and recent stress exposure. In particular, the foreign-born benefit from their lower likelihood of perceiving day-to-day discrimination, their perceptions of decreasing levels of family stress during the early adult years, and their lower likelihood of quitting school without degree completion.

We believe that there is no decline in the “immigrant advantage” across the two foreign-born categories (those who arrived before the age of six and those who arrived at age six or older) for a couple of reasons. First, in terms of exposure to cumulative and recent stress and the role changes encountered during the early adult years, early-arriving women are similar to, and sometimes more advantaged than, their later-arriving peers (See Table 2). Second, all of the foreign-born respondents had been living and attending schools in the United States since at least the 6th/7th grade. Thus, regardless of age at arrival, the foreign-born had been in the U.S. for many years and had undoubtedly been exposed to many of the same kinds of social contexts and socializing forces as their peers. In line with the earlier findings of Harker (2001), we conclude that the effect of assimilation on depression outcomes appears to act inter-generationally and not individually across time spent in the U.S. Despite background characteristics that place many immigrants at risk for poor psychological outcomes, the findings presented here suggest that young Hispanic women of foreign-birth are more protected from stressful, negative experiences than are young Hispanic women of native birth. As such, the psychological well-being of the foreign-born may be better protected and strengthened during the tumultuous early adult years.

While this association between foreign-birth and a reduction in depressive symptoms does not differ by ethnic background, we find an interesting interaction between ethnic background and our measure of recent stressful life events. The depressive symptoms of young Nicaraguan and “other” Hispanic women are relatively unaffected by their recent exposure to stressful life events, but the depressive symptoms of Cuban women are positively associated with this exposure. At low levels of stress exposure, Cuban women face an advantage relative to their non-Cuban counterparts. With increasing stress exposure, this Cuban advantage disappears. Yet, because the average respondent of all ethnic backgrounds reports a small number of negative events, the vast majority of respondents fall within the range of exposure associated with a Cuban advantage. Analyses have not yet isolated the factors that lead to this advantage.

Given that Hispanic immigrants make up one of the fastest growing subpopulations of American society, the positive psychological well-being experienced by young Hispanic women of foreign-birth could prove beneficial to the long-term outlook of our nation. Future research, however, must explore more deeply the familial and communal environments in which these young people live and from which they derive protection against stressful life events, stressful family relationships and experiences with everyday discrimination. Future research should also explore in greater depth the reasons why young Hispanic women of foreign-birth tend to be more engaged in school (i.e. higher likelihood of consistent enrollment and lower likelihood of dropping out of school) than their native-born peers, and whether or not there is a reciprocal relationship between school engagement and the experience of depressive symptoms. The fact that foreign-born Hispanic men do not accrue advantages from their nativity status in the way that foreign-born women do suggests that young Hispanic men may be less closely supervised or less enmeshed within protective environments that can buffer young people from stress exposure. Although we are uncertain of the extent to which these findings are generalizable to older populations, the findings here suggest that mental health treatment and prevention efforts should focus on reducing stress exposure among young adults.

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Figure 1.
Depressive Symptoms (Predicted Probabilities) by Ethnicity and Number of Recent Stressful Life Events

Table 1

Weighted Means and Standard Deviations of Depressive Symptoms and Socio-Demographic Variables, Hispanic Young Adults by Nativity Status and Gender

	MALES (n=292)			FEMALES (n=261)		
	Native-born	Foreign-born/Before Age 6 (FBLT6)	Foreign-born/Age 6 or Older (FB6+)	Native-born	Foreign-born/Before Age 6 (FBLT6)	Foreign-born/Age 6 or Older (FB6+)
<i>Depressive Symptoms:</i>						
Depressive Symptoms Wave 1 (range = 0–60)	10.54 [6.98]	11.34 [6.86]	12.97 [8.26]	16.36 [9.25]	16.60 [10.66]	13.56 [7.84]
Depressive Symptoms Wave 2 (range = 0–60)	9.49 [7.15] [^]	7.34 [5.46] [^]	10.07 [7.75] [^]	13.20 [8.63] [^]	10.25 [7.86] [^]	10.26 [8.49] [^] , *
<i>Background Characteristics</i>						
Age in Years at Wave 1 (range = 18–23)	19.64 [0.65]	20.02 [0.78]	20.17 [0.96] [*]	19.92 [0.84]	20.07 [0.80]	20.34 [1.15] [*]
Race/ethnicity:						
Cuban	0.60 [0.49]	0.49 [0.50]	0.19 [0.40]	0.59 [0.49]	0.47 [0.50]	0.18 [0.39]
Nicaraguan	0.02 [0.13]	0.31 [0.46]	0.57 [0.50]	0.02 [0.14]	0.16 [0.37]	0.41 [0.50]
Other Hispanic	0.38 [0.49]	0.20 [0.41]	0.24 [0.43]	0.39 [0.49]	0.37 [0.49]	0.41 [0.50]
Childhood Socioeconomic Status:	0.08 [0.91]	−0.10 [0.88]	−0.56 [0.81] [*]	0.04 [0.96]	−0.25 [0.73]	−0.22 [0.90]
Childhood Family Structure:						
Two Biological Parents	0.61 [0.49]	0.71 [0.46]	0.59 [0.50]	0.55 [0.50]	0.68 [0.47]	0.58 [0.50]
Stepfamily	0.14 [0.34]	0.10 [0.30]	0.10 [0.30]	0.18 [0.39]	0.13 [0.33]	0.23 [0.42]
Single Mother Family	0.27 [0.44]	0.17 [0.38]	0.24 [0.43]	0.20 [0.40]	0.17 [0.38]	0.18 [0.39]
Other Family	0.02 [0.15]	0.02 [0.13]	0.08 [0.27]	0.08 [0.28]	0.08 [0.27]	0.03 [0.18]
Current Living Arrangement:						
Lives with Partner/Spouse	0.17 [0.37]	0.18 [0.39]	0.16 [0.37]	0.31 [0.47]	0.29 [0.46]	0.28 [0.45]
Does Not Live with Partner/Spouse	0.83 [0.37]	0.82 [0.39]	0.84 [0.37]	0.69 [0.47]	0.71 [0.46]	0.72 [0.45]
N	169	59	63	148	47	66

[^] statistically significant (p < 0.05) t-tests indicating a drop in mean level of depressive symptoms between Waves 1 and 2, within nativity status group.

^{*} statistically significant (p < 0.05) Chi-square tests indicating differences among means, by nativity status group.

Table 2

Weighted Means and Standard Deviations of Stress Exposure and Role Change Variables, Female Hispanics by Nativity Status

	Native-born	Foreign-born/Before Age 6 (FBLT6)	Foreign-born/Age 6 or Older (FB6+)
<i>Stress Exposure</i>			
Lifetime Stressful Events, Before Wave 1 (range = 0–21)	4.12 [3.06]	3.08 [2.77]	3.30 [2.55]*
Perceived Major Discrimination Events (range = 0–7)	0.74 [1.03]	0.73 [1.04]	0.65 [1.13]
Perceived Day-to-Day Discrimination (range = 1–5)	1.65 [0.54]	1.50 [0.50]	1.43 [0.47]*
Recent Stressful Life Events, After Wave 1 (range = 0–33)	2.73 [2.27]	1.88 [2.22]	1.76 [1.69]*
Change in Level of Family Stress Between Waves 1 & 2 (range = –4–4)	–0.09 [0.91]	–0.14 [0.97]	–0.19 [1.05]
<i>Young Adult Roles and Role Changes</i>			
Student Role:			*
Student at Both Wave 1 and Wave 2	0.26 [0.44]	0.38 [0.50]	0.44 [0.50]
Not Student at either Wave 1 or Wave 2	0.32 [0.47]	0.35 [0.48]	0.33 [0.47]
Began Attending School Between Waves 1 & 2	0.11 [0.32]	0.11 [0.32]	0.11 [0.32]
Stopped Attending School, Quit, Between Waves 1 & 2	0.16 [0.37]	0.09 [0.29]	0.09 [0.29]
Stopped Attending School, Graduated, Between Waves 1 & 2	0.14 [0.35]	0.07 [0.25]	0.03 [0.18]
Employee Role:			
Employed at Both Wave 1 and Wave 2	0.54 [0.50]	0.57 [0.50]	0.56 [0.50]
Not Employed at either Wave 1 or Wave 2	0.11 [0.32]	0.09 [0.29]	0.10 [0.30]
Began Employment Between Waves 1 & 2	0.20 [0.40]	0.24 [0.43]	0.17 [0.38]
Stopped Employment, Lost Job, Between Waves 1 & 2	0.03 [0.16]	0.02 [0.15]	0.02 [0.13]
Stopped Employment, Other Reason, Between Waves 1 & 2	0.12 [0.33]	0.08 [0.28]	0.15 [0.36]
Spousal Role:			
Never Married at Both Wave 1 or Wave 2	0.70 [0.46]	0.67 [0.48]	0.70 [0.46]
Married at Both Wave 1 and Wave 2	0.13 [0.33]	0.13 [0.34]	0.10 [0.30]
Divorced/Separated at Both Wave 1 and Wave 2	0.02 [0.13]	0.05 [0.21]	0.06 [0.24]
Married Between Waves 1 & 2	0.09 [0.29]	0.00 [0.00]	0.09 [0.29]
Divorced/Separated Between Waves 1 & 2	0.06 [0.24]	0.10 [0.30]	0.04 [0.20]
Parental Role:			
Parent at Both Wave 1 and Wave 2	0.10 [0.30]	0.10 [0.30]	0.15 [0.36]
Not Parent at Either Wave 1 or Wave 2	0.71 [0.46]	0.82 [0.39]	0.67 [0.47]
Change in Parental Status Between Waves 1 & 2	0.10 [0.30]	0.04 [0.19]	0.11 [0.31]
N	148	47	66

* statistically significant ($p < 0.05$) Chi-square tests for differences among means, by nativity status group.

Table 3

Wave 2 Depressive Symptoms of Female Hispanics by Nativity Status, OLS Regression Coefficients and Robust Standard Errors (n=261)

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Depressive Symptoms at W1	0.42 ***	0.06	0.37 ***	0.06	0.36 ***	0.06
Native-Born (ref)	~	~	~	~	~	~
Foreign-Born / Before Age 6 (FBLT6)	-3.05 **	1.19	-3.56 **	1.26	-2.85 *	1.22
Foreign-Born / Age 6 or Older (FB6+)	-1.75	1.20	-3.35 **	1.30	-2.61 *	1.24
<i>Socio-demographic Characteristics</i>						
Age in Years			-0.22	0.50	-0.18	0.50
Cuban (ref)	~	~	~	~	~	~
Nicaraguan			4.03 **	1.59	3.97 *	1.57
Other Hispanic			3.32 **	1.05	2.75 **	1.00
Childhood Socioeconomic Status			-0.28	0.57	-0.34	0.53
Childhood Family - Two Biological Parents (ref)	~	~	~	~	~	~
Childhood Family - Stepfamily	0.29	1.27	0.80	1.22	-0.35	1.21
Childhood Family - Single Mother	1.15	1.39	0.72	1.32	0.66	1.31
Childhood Family - Other Family	4.59 **	1.77	4.63 **	1.70	4.10 **	1.57
Does Not Live with a Partner/Spouse (ref)	~	~	~	~	~	~
Lives with Partner/Spouse	-1.91	1.01	-2.22 *	1.00	-1.15	0.96
<i>Cumulative Stress Exposure, Before Wave 1</i>			4.76 ***	0.90		
Perceived Day-to-Day Discrimination					-3.67 *	1.51
<i>Recent Stress Exposure, After Wave 1</i>						
Recent Stressful Life Events			0.46 *	0.23		
Recent Change in Level of Family Stress			2.33 ***	0.44		
<i>Young Adult Roles and Recent Role Changes</i>						
Student at Wave 1 & Wave 2 (ref)	~	~	~	~	~	~
Not Student at either Wave 1 or Wave 2			3.42 **	1.37	2.25	1.22
Began School between Wave 1 & Wave 2			2.88	1.77	1.00	1.83

Independent Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.	coeff.	s.e.
Stopped School, Quit, between W1 & W2									5.44 ***	1.57	4.13 **	1.49
Stopped School, Graduated, between W1 & W2									0.75	1.55	-0.07	1.44
Married at Wave 1 & Wave 2 (ref)									~	~	~	~
Never Married at Wave 1 & Wave 2									-3.41 *	1.76	-2.70	1.60
Divorced/Separated at Wave 1 & Wave 2									-1.99	2.54	-0.91	2.20
Married between Wave 1 & Wave 2									1.23	1.94	2.31	1.81
Divorced/Separated between Wave 1 & Wave 2									0.99	2.01	0.16	1.90
R-squared	0.23		0.30		0.37		0.38		0.36		0.47	

*
p<0.05**
p<0.01***
p<0.001