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## The Role of Bicultural Stress and Perceived Context of Reception in the Expression of Aggression and Rule Breaking Behaviors Among Recent-Immigrant Hispanic Youth

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### Abstract

Adolescent aggression and delinquency impede healthy adjustment in early adulthood and may have particularly serious long-term consequences for minority youth. Therefore, prevention research should examine these behaviors within a sociocultural framework among newer immigrant samples to determine whether, and how, adaptation to life in the US affects these behaviors. This study investigated the role of two sociocultural variables—bicultural stress and negative context of reception—on changes in aggression and rule breaking behaviors over two time points among recently immigrated Hispanic adolescents residing in Los Angeles (N = 136) and Miami-Dade (N = 142) counties. Linear stepwise regression models were used to assess the associations between predictors and behavioral outcomes. Bicultural stress and negative context of reception both had independent associations, above and beyond parental involvement and delinquent peer associations, with changes in aggressive and rule-breaking behavior during the first year of high school. These findings suggest that social, cultural, and interpersonal processes all influence deviant behaviors in recent-immigrant Hispanic populations. We discuss the implications of these findings for prevention and intervention research and practice. We also recommend that future research continue to examine the role of these factors over the course of adolescence and consider sociocultural influences when designing behavioral interventions for Hispanic immigrant populations

### Keywords

cultural contexts; community violence; youth violence

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## Background

Immigrant Hispanic youth (and Mexican American youth, in particular) have disproportionately high rates of school dropout, incarceration, law enforcement interaction, gang affiliation, and substance use (Eaton et al., 2012; Carson & Sabol, 2012; Portes & Rumbaut, 2005; Smokowski, David-Ferdon, & Stroupe, 2009). These disparities in outcomes underscore the need for continued research that can inform policy and practice to improve health, education, and behavioral outcomes for minority youth. As the U.S. population becomes more culturally diverse—largely through immigration and through births to immigrants—health researchers and practitioners have examined how acculturation patterns and processes may affect adolescents' psychosocial and behavioral outcomes (Berry, 2005; Berry, Phinney, Sam, & Vedder, 2006; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Schwartz, Zamboanga, & Jarvis, 2007).

Not all immigrant groups fare equally well upon arrival in the United States, with noted differences both across and within groups (Huynh & Fuligni, 2010; Stepick & Stepick, 2002; Zhou & Portes, 1993). Children in immigrant families face a multitude of challenges: They must learn to balance the cultural values and expectations of their parents with those of their new peers, overcome language barriers, and adjust to the demands of their local community. Although the high rates of arrest and detention witnessed by some immigrant groups may be a function of racial profiling, racially biased sentencing, and increased police presence in low-income neighborhoods (Spohn, 2013), research will benefit from identifying factors unique to the immigration experience that may increase risk of problematic behaviors.

Potential macro- and micro-level influences on adjustment to life in a new country among immigrant youth include, but are not limited to, acculturative processes; the economic, social, and political openness of the host communities (as well as immigrants' perceptions of these factors); family relationships; and social integration (Alba & Nee, 2005; Berry, 2005; Zhou & Portes, 1993). Because research investigating the influence of sociocultural and contextual factors on adaptation to life in the United States among Hispanic immigrant populations has primarily focused on outcomes among longer term and second-generation immigrants (Berry et al., 2006; Zhou & Portes, 1993), the interplay among community context, psychosocial variables, and outcomes that may affect long-term adaptation patterns remains an understudied component of health disparities research.

## Segmented Assimilation

The extant literature examining disparities in educational, behavioral, and health outcomes suggests that immigrants assimilate into *sectors* of American society, rather than exclusively to the White American “mainstream,” and that this process of “segmented assimilation” may exert considerable influence on successive generations (Alba & Nee, 2005; Portes, Fernández-Kelly, & Haller, 2005). Rather than considering acculturation as a linear trajectory toward the adoption of “White American” mainstream practices, segmented assimilation theory argues that individuals and/or groups will acculturate into the sectors of society in part defined by economic and social opportunities. Zhou and Portes (1993)

broadly defined these divergent paths as (a) *selective*—those who experience rapid economic and social success while preserving heritage values; (b) *consonant*—groups who acculturate to U.S. middle-class values, practices, and status through academic achievement and business success; and (c) *dissonant*—if children adopt the majority culture’s language, practices, and values faster than their parents. This dissonant process can heighten vulnerability for the particularly risky pattern of *downward* assimilation into the marginalized, poor underclasses in urban, inner cities. Downward assimilation places the individual, and the community, at greater risk of negative economic, social, and health outcomes (Portes, 2007). Portes and Rumbaut (2001) have argued that several factors increase an adolescent’s risk of downward assimilation that include discrimination, exposure to other troubled youth, inadequate parental supervision, and few formal sources of support.

The identification of modifiable risk factors that increase vulnerability toward downward assimilation among new immigrant groups could facilitate the development of interventions to improve the social, educational, and economic opportunities for youth, their families, and communities. Two notable risk behaviors that heighten susceptibility for downward assimilation are aggression and rule breaking behaviors. More aggressive youth often have difficulty integrating with their more normatively oriented peers, a form of social rejection that then can encourage friendships and bonding with adolescents more tolerant and encouraging of these behaviors (Dishion, Duncan, Eddy, Fagot, & Fetrow, 1994; Tremblay, Pagani-Kurtz, Mâsse, Vitaro, & Pihl, 1995). Associations with other delinquent youth are strong correlates of aggression and general deviancy, but have also been evidenced to increase the frequency, intensity, and duration of problematic behaviors that only further alienate students from mainstream groups (Copeland-Linder, Lambert, & Ialongo, 2010; Gil & Vega, 2001; Nagin & Tremblay, 2001).

Rule breaking behaviors (i.e., property damage, truancy, drug use) also incur consequences (e.g., law enforcement exposure, detention) that undermine an adolescent’s ability to achieve academic success, maintain school connectivity, and qualify for future employment. Police scrutiny and/or enhanced supervision can draw negative attention from peers and the community, which in turn stigmatizes an adolescent as rebellious and problematic and often disrupts family functioning and exacerbates problematic relationships. Moreover, among immigrants, both aggression and rule breaking have been associated with downward assimilation in adulthood (Alba & Nee, 2005; Portes & Rumbaut, 2005).

Family dynamics are also important etiological components of risk behavior, and perhaps even more so for youth who are in the throes of identity development as well as navigating the immigration and adaptation processes. Lower levels of parental involvement have been shown to increase risk of aggression and deviancy, whereas high levels of parental involvement can actually attenuate the stress associated with the acculturation process (Loeber & Farrington, 2012; Szapocznik & Hernandez, 1988; Wang, Dishion, Stormshak, & Willett, 2011). However, the extent to which cultural adaptation processes and contexts of reception influence aggressive and rule breaking behaviors—beyond social influence variables (parental involvement and peer associations)—is not well understood. Numerous studies have emphasized the effects of proximal social influence variables on risk behavior, yet little is known about the influence of sociocultural processes on new immigrant youth

behavior after controlling for parental and peer factors. A more comprehensive understanding of cultural predictors of aggression and delinquency could provide useful information for prevention purposes that ultimately may interrupt or prevent downward assimilation for high-risk youth in these critical, early years of adaptation to life in the United States. Below, we review two hypothesized cultural predictors of aggression and rule breaking: context of reception and bicultural stress.

## Context of Reception

The political climate toward immigration in the state or community in which a person or group settles may represent another important but more distal influence in the adaptation process (Zhou & Xiong, 2005). Social context influences have important implications for immigrant outcomes, and immigrants' perceptions of context are defined by the host community as well as by the immigrants themselves. Recent work has defined *context of reception* as the social and economic opportunities, openness or hostility expressed by the local community, and social supports available for immigrants (Portes & Rumbaut, 2005; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Communities' receptivity to newcomers of all, or specific, ethnicities likely influences the current and future expectations of immigrant children, their levels of coping and stress, and consequently their behavior.

Just as communities differ in their openness toward immigrants and in their acceptance of language preferences and cultural practices, adolescents' perception of their reception in a new culture depends upon individual psychosocial factors and the specific environmental conditions in which they establish themselves (Schwartz et al., 2014). Perceived context of reception may be an important component of the complex relationship among culture, immigration, adaptation, and behavioral outcomes. Whether a child believes she or he is welcomed and afforded the same opportunities as those who are established in the United States, or as other immigrant groups, likely shapes that child's friendship choices and social behavior.

## Bicultural Stress

Stress and coping models of adolescent risk behavior have established the influence of individual responses to contextual factors on aggression and rule breaking (Fishbein, 2000; Greenwald, 2002; Logan-Greene et al., 2011). There is strong evidence that acculturation processes affect Hispanic immigrant adolescents' psychological and behavioral health over and above general measures of life stress (Berry, Kim, Minde, & Moke, 1987; Romero & Roberts, 2003). While stressful events refer to any psychological, physical, and/or situational demands that strain an individual's capacity to cope effectively (Folkman & Lazarus, 1980; Lazarus, 1997), bicultural stress represents an adolescent's cognitive appraisal of experiences related to discrimination from peers, monolingualism, and intergenerational conflict (Romero & Roberts, 2003). Sustained maladaptive responses (e.g., aggression, violence, substance use) to stress diminish the capacity of future functional coping (Bar-On, Tranel, Denburg, & Bechara, 2003) and increase the "wear and tear"

associated with chronic stress conditions that challenge psychological and behavioral health in adulthood (McEwen, 2003).

## The Current Study

The current study was designed to assess whether two constructs associated with cultural adaptation—bicultural stress and negative context of reception—were associated with changes in aggression and rule breaking behaviors among recent-immigrant Hispanic adolescents over a 6- to 8-month period during the first year of high school. We hypothesized that bicultural stress and negative perceptions of the context of reception would be uniquely associated with increases in aggressive behavior and rule breaking (observed between the summer before or after ninth grade and our second assessment 6–8 months later), beyond the influence of known risk factors such as associations with delinquent peers and parental involvement. We recruited, assessed, and followed adolescents in Miami and Los Angeles, two major receiving communities for Hispanic immigrants, as a way of providing a more diverse slice of the Hispanic population than would be available at any one location.

## Method

### Sample

*Constuyendo Oportunidades Para Adolescentes Latinos (COPAL)* is a longitudinal study designed to explore the association between cultural change and health behaviors among recently arrived Hispanic immigrant adolescents and their families in Miami and Los Angeles. The sample selection and data collection procedure are described in detail by Schwartz and colleagues (2012) and are summarized briefly here. We restricted our sample to the 278 participants (92% of the Time 1 participants) who returned for the Time 2 assessment (6–8 months after the baseline survey). Participants from Los Angeles were predominantly Mexican (70%), and participants from Miami were predominantly Cuban (61%). Adolescents were entering or currently enrolled in 9th grade at a public school in Miami-Dade or Los Angeles Counties.

### Procedures

Participants were recruited from 13 schools in Los Angeles County and 10 schools from Miami-Dade County. Only schools that were at least 75% Hispanic were selected for the study, given that most recent Hispanic immigrants reside in heavily Hispanic areas (Kasinitz, 2008; Stepick, Grenier, Castro, & Dunn, 2003). Because most recently immigrated students are enrolled in English for Speakers of Other Languages (ESOL) classes, our recruitment efforts were concentrated toward ESOL students and remedial English classes.

Adolescents were eligible to participate if they had lived in the United States for 5 years or less at baseline, if the adolescent was entering or currently enrolled in 9th grade at baseline, and if the family intended to remain in the study catchment area over the 4 years of the study. Of the 435 families who met the criteria and were contacted successfully, 302 (69%) participated. Prior to the baseline assessment, parents provided informed consent for

themselves and their adolescents, and adolescents provided informed assent in a separate room to reduce the possibility that parents might influence their adolescents' decision to participate. Of the sample, 92% ( $n = 278$ ) were retained at the second time point.

An audio computer-assisted interviewing (A-CASI) system was used to administer surveys in either English or Spanish, according to the adolescent's preference. Most adolescents (84%) chose to complete the baseline assessment in Spanish at baseline, and 13% of adolescents switched languages at Time 2. The study was approved by the Institutional Review Boards at the University of Southern California and at the University of Miami, and by the participating school districts.

## Measures

**Demographic variables**—The number of years lived in the United States was measured using one item “How many years have you lived in United States?” Parents self-reported their educational attainment by responding to the question, “How many years of school have you completed?” Gender was coded 0 (*female*) and 1 (*male*).

## Covariates

**Delinquent peers (Cronbach's = .94 at baseline)**—The Peer Antisocial Behavior Scale is a self-report version of an interview measure developed by Dishion and colleagues (1995) and validated by Schwartz et al. (2006). Items include “In the past 6 months . . .,” “how many of your friends have broken into a car or building to steal something,” “. . . how many of your friends have sold or given alcohol or drugs to other kids your age,” and “. . . how many of your friends have suggested that you do something against the law?” Responses were scored 0 (*none of them*), 1 (*a few of them*), 2 (*some of them*), 3 (*most of them*), and 4 (*all of them*), and were then summed to create a composite score. Higher scores suggest that a student has more friends who engage in delinquent behaviors.

**Parental involvement (Cronbach's = .88 at baseline)**—The 17-item Parental Involvement subscale from the Parenting Practices Scale (Gorman-Smith, Tolan, Zelli, & Huesmann, 1996) was used to assess perceived parental involvement in the adolescent's life. A sample item from this subscale is “How often does your parent discuss with you your plans for the coming day?” Response categories were 0 (*never*), 1 (*hardly ever*), 2 (*sometimes*), 3 (*most of the time*), and 4 (*always*). Higher scores represent greater adolescent-reported parental involvement.

## Predictors

**Perceived negative context of reception (Cronbach's = .83 at baseline)**—Perceived negative context of reception was assessed using a 6-item scale (Schwartz et al., 2014). Items measure the extent to which the respondent perceives that the opportunities and openness offered by the receiving community (e.g., employment or grades) do not favor one's ethnic group. The items are “People from my country are not welcome here,” “My family and I would be treated better if we were more like other immigrant groups,” and “I don't have the same chances in life as people from other countries.” “It is hard for me to get good grades because of where I am from,” “Teachers treat kids from my country differently

than kids from other countries,” “People in this country often criticize people from my country.” Responses were recorded on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and were summed to calculate a composite negative context of reception score, with higher scores representing stronger negative perceptions.

**Bicultural stress (Cronbach’s = .89 at baseline)**—This 20-item measure assesses the social sources of stress associated with bicultural contexts, parent–adolescent cultural gaps, and embarrassment about having an accent or not speaking English well (Romero & Roberts, 2003). Sample questions include the following: “I have had to help my parents by explaining how to do things in the United States,” “I do not feel comfortable with people whose culture is different from mine,” and “I have argued with family members because I do not want to do some traditions.” Responses were recorded on a 5-point scale including 0 (*never happened to me*), 1 (*not at all stressful*), 2 (*a little bit stressful*), 3 (*quite a bit stressful*), and 4 (*very stressful*) and were summed to calculate a composite bicultural stress score, with high scores indicating greater bicultural stress.

## Outcomes

**Aggressive behavior (Cronbach’s = .91 at baseline)**—A total of 17 items comprise the Aggressive Behavior subscale from the Youth Self-Report (Achenbach & Rescorla, 2001). These items assess how true a statement is of the adolescent’s behavior within the previous 6 months. Sample statements include “I tease others a lot,” “I physically attack people,” and “I am mean to others.” Possible response options included 0 (*not true*), 1 (*sometimes or somewhat true*), or 2 (*often or very true*). Items were summed to calculate aggressive behavior scores, with higher scores representing greater levels of aggression.

**Rule breaking behavior (Cronbach’s = .91 at baseline)**—The Rule Breaking Behavior subscale is composed of 15 items from the Youth Self-Report survey to assess rule/law breaking within the last 6 months (Achenbach & Rescorla, 2001). Sample items include “I break rules at home, school, or elsewhere,” “I run away from home,” “I set fires,” and “I drink alcohol without my parents’ permission.” Response options were 0 (*not true*), 1 (*somewhat or sometimes true*), and 2 (*very true or often true*). Responses were summed to derive a total score, where higher scores represent more rule breaking.

## Analytic Strategy

We conducted *t* tests and chi-square analyses to describe distributions of variables, to summarize demographic characteristics across sites, and to compare predictor variables by site (Table 1). Due to the positively skewed distribution of the outcome variables, a  $\log_{10}(x + 1)$  transformation was used to satisfy the assumptions of normality and linearity. Continuous predictor variables were standardized to a mean of 0 and a standard deviation of 1 for ease of interpretation. We used stepwise linear regression models to test our hypotheses that bicultural stress and negative context of reception would be uniquely associated with rule breaking and aggression over a 6- to 8-month period when controlling for T1 outcomes demographic factors, and the previously documented influences of parental involvement and delinquent peers. Gender, site, parent education, years in the United States, and baseline aggression/rule breaking were entered as the first block of predictors in the

regression models; parental involvement and delinquent peers were added on Step 2; and bicultural stress and negative context of reception were added on Step 3 to assess the influence of these variables above and beyond variables entered in previous steps. We calculated Predictor  $\times$  Site interaction terms to assess whether findings varied by location (Miami and Los Angeles).

## Results

Demographic characteristics, means, and standard deviations for all study variables are presented in Table 1. No significant differences were indicated by *t* tests across sites in any of the predictor or outcome variables. However, there were demographic differences between the sites: at Time 1, families in Los Angeles had, on average, been living in the United States for 4.78 years ( $SD = 2.95$ ), whereas families in Miami had been living in the United States for 2.51 years ( $SD = 2.72$ ), ( $p < .001$ ). Parents in Los Angeles had completed slightly more than 8 years of formal education, whereas parents in Miami had, on average, completed 12 years of education ( $p < .001$ ). Therefore, time in the United States and parental education were included as covariates (in addition to gender, which has also been documented as a strong predictor of aggression and rule breaking (for reviews, see Eagly & Steffen, 1986; Hyde, 1986). Aggression and rule breaking were positively correlated ( $r = .84$ ,  $p = .002$ ), suggesting that individuals involved in rule breaking behaviors also tend to exhibit aggressive behavior.

### Rule Breaking Behavior

Among variables entered in the first block, site and Time 1 rule breaking behaviors were significant predictors of Time 2 rule breaking behavior when controlling for time in the United States, parental education, and gender (model  $p < .001$ ,  $R^2 = .24$ ). Delinquent peers and parental involvement were entered as a second block and increased the proportion of the variance explained in our outcome by 6.2% (total  $R^2 = .299$ ) with only delinquent peers ( $\beta = .23$ ,  $p = .014$ ) and rule breaking at Time 1 ( $\beta = .26$ ,  $p = .005$ ) significantly associated with a change in rule breaking behavior at Time 2. Bicultural stress and perceived negative context of reception were entered in the third step. Both bicultural stress ( $\beta = .19$ ,  $p = .035$ ) and perceived negative context of reception ( $\beta = .19$ ,  $p = .021$ ) were significantly associated with Time 2 rule breaking behavior after controlling for the variables in the first two steps (model  $p < .01$ ,  $R^2 = .35$ ) and increased the  $R^2$  value by 5.1% (Table 2). No Predictor  $\times$  Site interactions were significant, indicating that the pattern of results was similar across sites.

### Aggression

Of the variables entered in the first block, only Time 1 aggressive behavior was positively predictive of aggressive behavior at Time 2 (model  $p < .001$ ,  $R^2 = .224$ ). Among the second block of variables, which increased  $R^2$  by 6.0% (model  $R^2 = .282$ ,  $p = .004$ ), only delinquent peers ( $\beta = .263$ ,  $p = .002$ ) and Time 1 aggression ( $\beta = .303$ ,  $p = .002$ ) were positively associated with aggression at Time 2. Both perceived negative context of reception ( $\beta = .184$ ,  $p = .021$ ) and bicultural stress ( $\beta = .318$ ,  $p < .001$ ), entered in the third block, were predictive of aggression at Time 2 and increased the total  $R^2$  by 9.1% (model  $R^2 = .37$ ,  $p < .001$ ) (Table 3). No Predictor  $\times$  Site interactions were significant.



## Discussion

This study extends previous research on the role of sociocultural stressors in aggression and rule breaking behaviors. Because proximal variables such as parental involvement and delinquent peer groups exert large effects on risk behaviors and can often mask the effects of more distal factors (Agnew, Thompson, & Gaines, 2000; Wallace & Bachman, 1991), we were interested in assessing the independent effects of two specific constructs, bicultural stress and negative perceptions of one's context of reception, on changes in aggressive and rule breaking behaviors above and beyond the influences of parental involvement and delinquent peer affiliations.

We included a number of demographic variables (gender, time in the United States, parent education), social influence factors (friends' behavior, perceived parental involvement), and culturally based stressors (bicultural stress and perceived negative context of reception) in our models assessing changes in aggressive and rule breaking behaviors. As expected, proximal factors (i.e., delinquent peers and parental involvement) were positively associated with aggression and rule breaking at Time 2, controlling for Time 1 scores on aggression and rule breaking. However, for both aggression and rule breaking, the cultural constructs emerged as significant predictors even after controlling for the previously documented demographic and social predictors.

Extant literature suggests that the majority of adolescent defiance and aggression tends to begin in early to mid-childhood, peaks during mid- to late adolescence, and then declines as the individual matures and acquires adult responsibilities (Moffitt, 1993). However, this short-term engagement in problem behaviors, particularly if it is associated with stressors and perceptions unique to the immigration experience (Romero, Martinez, & Carvajal, 2007), may have far-reaching consequences for immigrant youth. If rule breaking behavior draws the attention of school or law enforcement officials within the first years of residence in the United States, the ensuing entanglements with legal, educational, and child welfare institutions could substantially increase the burden for a child transitioning to life in a new community and, in some cases, may even lead to deportation. The tangible and psychological consequences of problem behavior during the first years of adaptation may indeed impact the actual or perceived opportunity structure (academically and socially) that then, in turn, increase risk of assimilation into segments of society that are afforded fewer economic and educational opportunities. Moreover, these interactions can heighten feelings of rejection by the host community—perceptions that may be involved in the escalation of problem behavior.

Extrapolating from the present results, an iterative relationship between problem behavior and negative perceptions of the host community could account for some proportion of the behavioral outcomes and pathways of adaptation among immigrant youth. Aggressive students are also likely to be engaged in rule breaking behaviors, further compounding the potential for serious repercussions in the first few years after arrival in the United States. Future work will benefit from examining the relationship between these constructs over the course of adolescence to identify factors that may improve resilience for newer immigrant youth.

We found support for our hypothesis that perceived negative context of reception and bicultural stress would be uniquely associated with conduct problems and aggression. These results are consistent with both animal- and population-based studies that have shown stress to be a critical component in the expression of aggressive behaviors. Findings from laboratory studies testing stress-based paradigms of aggressive behavior indicate that social stressors (Tamashiro, Nguyen, & Sakai, 2005) and social isolation (Malick, 1979) are contextual factors that can induce or elevate aggressive interactions. Community-based studies, guided by sociological theories of criminal and aggressive behaviors, also report that adverse social conditions, most notably discrimination and disadvantaged community conditions, exacerbate aggression and rule breaking (Clark, Anderson, Clark, & Williams, 1999; Simons et al., 2006). The significant contribution of bicultural stress (as compared with main effects of other predictors) to the increase in aggressive behaviors from Time 1 to Time 2 supports our contention that the challenges involved in balancing two cultural streams should be addressed in prevention programs. Provided that prevention programs adequately address sociocultural barriers to adaptation and development among immigrant adolescents, they could facilitate a reduction in the prevalence of both behaviors (e.g., Smokowski & Bacallao, 2011).

The measure of bicultural stress used in this study captures the degree to which bicultural environments are perceived as problematic for the adolescent. Adapting to a bicultural environment and learning to balance the demands of family, school, and social contexts in a new country represents a long-term, experiential learning curve that probably occurs over the course of adolescence and perhaps even into adulthood. It is certainly possible that moving to a foreign country, learning a new language, and adjusting to new schools can strain adolescents' internal resources and can serve as a source of persistent stress in day-to-day life. This sense of marginalization, especially among those struggling to integrate heritage and receiving cultural streams, may deter individuals from pursuing more traditional paths (e.g., academics, prosocial normative peers, sports) to success. Skepticism regarding the benefits available through conventional means can also serve as a bonding mechanism between those who share this perspective. Ogbu's (2008) theory of oppositional culture proposes that these macro-forces serve as strong influences not only on individual behavior but also on group formation. It is conceivable that, among new immigrants, friendship selection is not only driven by behavioral homophily, but that this behavior is also a response to the perceived rejection by and/or hostility from the community or society into which that individual arrives.

### Limitations

The present findings should be interpreted in the context of at least three important limitations. First, our findings are based upon a fairly small natural-history sample of Hispanic immigrants at two time points. Therefore, care should be taken when generalizing the findings or drawing causal conclusions. Second, we did not assess risk behavior prevalence prior to immigration and therefore must limit our discussion to antecedents and consequences post immigration. Third, data were gathered from self-report surveys, which may be biased by socially desirable responding. However, although under- or over-reporting

may also be a function of recall and attribution bias, studies that rely on self-reports have yielded reliable results (Bradburn, Rips, & Shevell, 1987; Rutherford et al., 2000).

## Conclusions and Future Directions

Despite these limitations, the present results may have important implications for the study of immigrant incorporation. Segmented assimilation theorists argue that, once downward assimilation has occurred, it can be enormously difficult for individuals, and subsequent generations, to achieve better outcomes (Portes, 2007). Therefore, a clearer understanding of factors associated with behaviors that may increase risk of downward assimilation and challenge the adaptation process will substantially improve prevention and intervention programming. School-based programs are in a unique position to identify and assist immigrant students who are unable to integrate successfully upon arrival. By assisting students in the adaptation process, educators and health practitioners may help to attenuate the sense of marginalization and isolation that can be a precursor to downward assimilation. School-based health and education programs can help to promote greater tolerance for diversity and provide students with the resources to adequately address social and contextual stressors involved in adaptation and transition. Providing both majority-culture and new immigrant students the skills to enhance resilience, improve social integration, foster community acceptance, and promote diversity educators and practitioners can improve outcomes across heterogeneous Hispanic immigrant groups.

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## Biographies

**Myriam Forster** is a doctoral student in preventive medicine at the University of Southern California, Keck School of Medicine. Her research focuses on adolescent risk behaviors with an emphasis on ecological models of social aggression and interpersonal violence. She has a particular interest in the translation of empirical research findings into prevention strategies for underserved communities.

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**Daniel W. Soto** is the project manager for three National Institutes of Health (NIH)-funded longitudinal research studies that focus on Latino adolescent drug use, social networks, and acculturation. He earned his master of public health (MPH) degree from the University of Southern California, Keck School of Medicine. His research focus has been in the area of acculturation, social networks, and adolescent health risk behaviors.

**Seth J. Schwartz** is an professor of public health sciences at the University of Miami, Department of Public Health Sciences. He has a PhD in developmental psychology from Florida International University. His primary research interests are in identity, acculturation, ethnicity, family functioning, and adolescent risk-taking behavior. He is senior editor of the *Handbook of Identity Theory and Research* and of the forthcoming *Handbook of Acculturation and Health*.

**Jennifer B. Unger**, PhD, is a professor of preventive medicine at the University of Southern California, Keck School of Medicine. Her research focuses on the psychological, social, and cultural influences on health risk behaviors.

**Table 1**

Demographics and Study Variables Collected at Time 1.

	Los Angeles (n = 132)		Miami (n = 146)		$\chi^2$
	f	%	f	%	
Gender					
Male	85	56.7	75	49.0	0.14 (df = 1)
Female	63	42.0	78	51.0	
Missing	2	1.3	0		

  

	M	SD	M	SD	Range (minimum- maximum)	t value (df = 351)
Participant age	14.44	0.79	14.57	0.95	13-17	1.28
Years in the United States	4.78	2.95	2.51	2.72	0-5	7.13***
Parental education	8.84	4.72	11.23	3.67	0-17	5.05***
Parental involvement	35.92	10.71	37.46	11.05	9,21-56	1.23
Peer antisocial behavior	5.92	9.01	5.11	6.88	0-33	-0.65
Negative context of reception	8.91	4.52	8.53	4.95	0-24	-0.71
Bicultural stress score	19.50	13.65	17.48	14.95	0-76	-1.22
Rule breaking	3.85	4.27	3.34	4.56	0-33	-1.00
Aggressive behavior	5.30	5.38	4.48	5.20	0-33	-1.33

Note. f = frequency.

\* p < .05.

\*\* p < .01.

\*\*\* p < .001.



**Table 2**

Linear Regression Predicting Rule Breaking Behavior at Time 2.

	Model 1		Model 2		Model 3	
	$\beta$	<i>p</i> value	$\beta$	<i>p</i> value	$\beta$	<i>p</i> value
Intercept	.744	—	.781	—	.788	—
Site	-.231*	.002	-.229	.005	-.248**	.002
Gender	-.035	.598	-.066	.377	-.075	.305
Years in the United States	.02	.778	-.155	.877	.01	.893
Parent years of education	.017	.826	-.024	.981	-.058	.465
Rule breaking (Time 1)	.450***	<.001	.261**	.005	.244*	.014
Delinquent peers	—	—	.278**	.002	.227*	.014
Parental involvement	—	—	-.096	.205	-.116	.119
Bicultural stress	—	—	—	—	.192*	.035
Negative context of reception	—	—	—	—	.193*	.021
Model <i>R</i> <sup>2</sup> / <i>F</i>	.237	—	.299	—	.350	—
<i>R</i> <sup>2</sup> / <i>F</i>	.237/14.77	—	.062/6.29	—	.051/5.4	—
Model <i>p</i> value	<.001	—	.002	—	.016	—

Note. Standardized coefficients ( $\beta$ ) reported.

\* *p* < .05.

\*\* *p* < .01.

\*\*\* *p* < .001.

**Table 3**

Linear Regression Model Predicting Aggressive Behavior at Time 2.

	Model 1		Model 2		Model 3	
	$\beta$	<i>p</i> value	$\beta$	<i>p</i> value	$\beta$	<i>p</i> value
Intercept	.670	—	.643	—	.661	—
Site	-.105	.218	-.073	.384	-.095	.232
Gender	-.445	.657	-.031	.672	-.030	.672
Years in the United States	.043	.59	.018	.822	.038	.626
Parent education years			.022	.777	.032	.680
Aggression (Time 1)	.503***	<.001	.303***	.002	.220*	.027
Delinquent peers	.064	.443	.263**	.002	.182*	.047
Parental involvement	—	—	-.102	.196	-.139	.066
Bicultural stress	—	—	—	—	.318***	<.001
Negative context of reception	—	—	—	—	.184*	.021
Site $\times$ Gender						
Model <i>R</i> <sup>2</sup>	.224			.282	.371	
<i>R</i> <sup>2</sup> / <i>F</i>	.224/13.73			.06/5.7		.091/8.64
Model <i>p</i> value	<.001			.004		<.001

Note. Standardized coefficients ( $\beta$ ) reported.

\* *p* < .05.

\*\* *p* < .01.

\*\*\* *p* < .001.