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Hispanic Immigrant Youth and Internalizing Behaviors

Examining the Links with Neighborhood Context

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Abstract

Using longitudinal data from the Project on Human Development in Chicago Neighborhoods, this study examined links between Hispanic adolescent's internalizing behaviors and neighborhood characteristics. Our sample included 1,040 (aged 9 to 17) Hispanic immigrant youth identified as first-, second- and third-generation. Results indicated that first-generation youth had significantly higher internalizing behaviors compared to third-generation adolescents, even after controlling for family characteristics and Wave 1 internalizing behavior scores. Our results also showed that Hispanic youth living in neighborhoods that had higher residential stability had higher levels of internalizing behavior problems compared to first- and third-generation youth living in similar neighborhoods.

Keywords: Hispanics, immigrants, immigrant generation, minority youth, and neighborhoods.

Introduction

Projections estimate that children of immigrants are among the fastest growing segment of the population (Hernandez, 1999). It is expected that by the year 2020, children of immigrants will comprise 30 percent of the nation's population. Social science research has largely focused on immigrant adults; much less is known about immigrant children (Fuligni & Yoshikawa, 2003). Immigrant families whose children are born in the U.S. have been considered "mixed-status families" (Fix & Zimmerman, 1999) This mixed status may have implications for the family's well-being, which can include inconsistent access to medical care and restricted access to educational and legal services; children of immigrants are more likely to be born to less affluent parents who possess limited English skills and who reside in low-income neighborhoods (Cabrera et al.,2006; Capps et al., 2005).

While the links between parental immigration status and youth's outcomes are now being examined (Fuligni & Yoshikawa, 2003; Kwak, 2003; Portes & Rumbaut, 2001; Weiss, Goebel, Page, Wilson & Warda, 1999), most of this work has focused on academic achievement and familial roles, with less work being done on mental health outcomes. Furthermore, the role that neighborhood context plays has yet to be examined empirically. Therefore, this study has three goals. The first goal is to determine if adolescent internalizing problems are linked with immigrant status. The second goal is to see whether family level characteristics account for any such differences (if they are found). Third, links between internalizing problems and neighborhood characteristics are examined as are whether these links depend on immigrant status.

The Role of Immigration Status and Children's Emotional Well-being

Garcia-Coll and her colleagues (1990; 1995) contend that various processes associated with immigrant generation, such as family belief systems, are associated with children's mental health. She argues that micro- and macro-level processes, such as family child-rearing practices and society's response to minority groups, influence children's emotional well-being. Interestingly, within-group differences have also been found; for example levels of acculturation, that is the degree to which one integrates into mainstream society, were not directly associated with levels of depression in a sample of foreign-born and U.S.-born first-year college students (Cuellar & Roberts, 1997). Instead, socioeconomic status (SES) and ethnicity were directly associated with depression. In contrast, another study revealed that U.S.-born children of Mexican parents reported higher levels of depression as compared to foreign-born children of Mexican parents; they suggest that levels of acculturation may be associated with levels of mental health disorders (Glover, Pumariega, Holzer, Wise, & Rodriguez, 1999). While this sample was limited to two populations living in the Southwest, the findings suggest that within-group differences do exist and may be associated with the experience of being reared in the United States, where race and ethnicity are salient (Garcia-Coll, 1990; McLoyd, 1990).

The Role of Neighborhood Context in Children's Emotional Well-being

Links between neighborhood context and child well-being are being studied, although teasing out the effects of family processes (e.g., parenting), SES, and other family- and neighborhood-level characteristics has been difficult due to selection bias and study design (Raudenbush & Sampson, 1999). Associations between neighborhood characteristics (such as income) and children's mental health have been examined, but often data sets not designed to represent families nested within neighborhoods are used (Klebanov, Brooks-Gunn, Chase-Lansdale, & Gordon, 1997; Leventhal and Brooks-Gunn, 2000).

The bulk of the studies examining neighborhood SES effects on children's mental health indicate that low SES has adverse links on children's internalizing behaviors. Several other national and regional studies have suggested that residing in low-SES neighborhoods is associated with increased internalizing behaviors, along with higher crime and delinquent behavior rates. (Sampson & Groves, 1989; Simons, Johnson, Beaman, Conger, & Whitbeck, 1996, reported in Leventhal et al., 2000; see Chase-Lansdale et al, 1997, for an exception).

Using a neighborhood nested design from Chicago, 11 percent of the variance in internalizing behaviors (anxiety and depressive symptoms) for 5- to 11-year-olds was due to neighborhood differences, with an inverse association between neighborhood SES and the percent of children exhibiting internalizing behaviors (Xue et al., 2005). The significant neighborhood economic effects were mediated through community social control and cohesion.

Another approach is to look at family level poverty. A notable example is work on foreign-born children in Canada, native-born children of immigrants, and native-born children of native-born parents, vis-à-vis mental health (Beiser et al., 2002). Foreign-born immigrant children and their families may more often pass through transient poverty as part of the resettling process, while children in the other two groups who are classified as impoverished are more likely to be part of an entrenched poverty cycle. Results from this study indicate that the effects of poverty were indirectly acting primarily through its effects on parenting mental health and parenting behaviors.

Child/youth and parental immigration status was not empirically examined in any of these studies, leaving a gap in our knowledge of neighborhood effects on immigrant populations. Immigrant neighborhoods are thought to provide a wealth of social resources not afforded to immigrant families outside these settings. Still, these neighborhoods tend to be marked by

poverty and limited neighborhood resources. What are the implications for the mental health outcomes of immigrant children who live in poor, immigrant and residentially unstable neighborhoods? This study aims at answering this very question. Thus, three primary research questions will be answered: 1) Do internalizing behavior scores differ by immigrant generation among Hispanic adolescents?; 2) If differences exist, are disparities accounted for by family characteristics?; and 3) Where differences exist, do neighborhood characteristics explain those differences? Furthermore, do neighborhood effects on immigrant adolescent's internalizing behaviors differ by immigration status?

Methods

Study Design

The present study uses data from the Project on Human Development in Chicago Neighborhoods (PHDCN). The PHDCN is a longitudinal study aimed at advancing our understanding of the experiences of children who grow up in U.S. cities at the turn of the century. Three waves of data on families in 80 neighborhoods have been collected since 1995. Neighborhoods were sampled from 343 neighborhood clusters, which are made up 2–3 census tracts reflecting similar racial/ethnic and socioeconomic composition. These neighborhoods were derived using a two-stage random selection procedure that included neighborhoods stratified by race and ethnic composition (creating 7 categories) and socioeconomic status (low, medium, and high). Children were selected to participate in the study based on place of residence (i.e., 1 of the 80 selected neighborhoods) and age cohort (0, 3, 6, 9, 12, 15, and 18) at Wave 1. The design of this study makes it possible to explore individual and neighborhood-level differences in children’s internalizing behaviors, particularly among children of immigrant parents. The response rate at Wave 1 was 75 percent and 86 percent at Wave 2.

Sample

Table 1 provides descriptive statistics for the study sample. The present study is based on 1,040 Hispanic youth from three cohorts (9, 12, and 15); mean age was 12. The Hispanic sample was 47 percent of the total sample of youth at these ages. The study focused on three immigrant groups: first-generation (adolescents born outside of the U.S.; 24%); second-generation (U.S.-born adolescents with at least one foreign-born parent; 59%), third-generation and beyond (all U.S.-born adolescents with no foreign-born parent; 17%). Over a third of adolescents had mothers with less than a high school education (37%). The majority of adolescents came from married households (68%). The majority of adolescents were identified as Mexican (76%), less than one fifth (17%) were identified as Puerto Rican; the rest were from other Latin American countries (7%). Equal proportions were boys and girls.

Measures

Internalizing Behaviors. Internalizing behaviors were measured using the Child Behavior Checklist (Achenbach, 1991). Raw scores were used for analyses. Three subscales from the Child Behavior Checklist (Achenbach, 1991) were used to assess Internalizing Behaviors scales: withdrawal, somatic complaints, and depressive/anxious behaviors. Parents used a three-point Likert scale to report how true the statements were of their child (0=not true; 1=somewhat true; 2=very true) in the past six months. The Withdrawn subscale includes such questions as how true is it that the child would rather be alone. The Somatic Complaints subscale assesses the child's physical well-being, such as whether or not the child experienced dizziness or nausea in the last six months. The third subscale, which assesses depressive/anxious behaviors, is comprised of questions inquiring about the child's feeling state. For example, parents were asked if their child felt unloved or worthless in the last six months. Scores from the

three subscales were summed to produce a total internalizing score in Wave 1 (M= 9.18, SD = 7.66) and Wave 2 (M= 10.12, SD = 8.27).

Child Characteristics. Child characteristics include immigrant generation, gender and age. Child immigration status was determined using mother's report of the child's country of origin, her own country of origin, and the child's father's country of origin. Two dummy variables were coded to reflect child immigration status (first- and second-generation), with third-generation youth as the reference group (Sampson, Morenoff, & Raudenbush, 2005). Age was used as a continuous variable (M =11.93; SD = 2.44). Gender was dummy coded (0 = male; 1= female).

Parent Characteristics. Parent information includes family income-to-needs ratio, maternal education, and maternal marital status. Family income-to-needs ratio, a continuous variable, is used as the family income indicator. This ratio is constructed by dividing reported total annual family income by the official poverty threshold for the respective household size at the time of data collection (i.e., 1995). An income ratio of 1 or less indicates poverty (Brooks-Gunn & Duncan, 1997). Maternal education was dummy-coded, mothers with more than a high school education as the reference group. Two dummy variables were coded to indicate marital status (single or partnered), with married as the reference group.

PHDCN assessed mothers' depressive symptoms and major depression using the Comprehensive International Diagnostic Interview short form (CIDI-SF), an international protocol employed by the World Health Organization (Kessler, Andrews, Mroczek, Ustrun, & Wittchen, 1998). This instrument screens for a major depressive episode during the 12-month period preceding the interview. The purpose of the screener is to identify individuals who have a high probability of being classified with major depression (see Kessler et al., 1998). It does not

provide a clinical diagnosis of major depression. Probability rates were calculated based on participant responses and criteria described above. Mothers with a probability score for major depression of 0.55 or higher met criteria for probability for major depression. Neither the severity nor the duration of major depression was assessed in this study. Thirteen percent of mothers met the depression criteria. Mothers who met the .55 probability criteria and higher were coded as depressed and were assigned a '1'; non-depressed mothers were coded '0'. This control is necessary since mothers are reporting on their adolescent's internalizing problems, and a correlation exists between maternal report of depression and her ratings of her child (Boyle & Pickles, 1997; Fergusson, Lynskey, & Horwood, 1993).

Neighborhood Characteristics. Neighborhood-level factors include concentrated disadvantage and immigrant concentration, as developed by Sampson, Raudenbush, and Earls (1997). Concentrated disadvantage was derived from a factor analysis of the 343 clusters in Chicago. The five items identified were (1) percentage of households that were below the poverty line, (2) percentage of residents in receiving public assistance, (3) percentage of unemployed residents, (4) percentage of Black residents, (5) percentage of female-headed household, and (6) density of children. Immigrant concentration is also an oblique factor that reflects neighborhood differences on race and ethnicity and immigration. This factor is made up of two items: (1) percentage of immigrant residents and (2) percentage of Latino residents. Residential stability included the percentage of residents living in the same house as five years earlier and the percentage of owner-occupied homes (see Sampson, Raudenbush, & Earls, 1997 for more information).

Analytic Strategy

For descriptive purposes, we performed ANOVA and chi-square tests as a preliminary

step to compare the study variables across immigrant generations. Given our interest in neighborhood context, we then formulate two-level hierarchical linear models in which youth are nested within neighborhoods. Thus, the analysis proceeds in 4 steps. First, we examine the proportion of variance in mean internalizing behaviors between neighborhoods (i.e., the interclass correlation coefficient, ICC)[1]. Next, we estimate a level-1 model that includes child immigrant status, age, and gender. In particular, we focus on disparities in adolescent's internalizing behaviors by immigrant status. Then, we include a comprehensive set of family characteristics in the level-1 model. Finally, we add neighborhood-level predictors consisting of concentrated disadvantage, immigrant composition, and residential stability. This sequence of models will be useful for uncovering the pathways through which observed disparities in adolescent's internalizing behaviors operate. All continuous variables were z-scored in our analyses, so that the coefficients from the multivariate, multi-level models can be interpreted as effect sizes.

Results

Here, we present results for descriptive statistics for all youth by immigration status. This section also provides results from the unconditional model—i.e., the model that does not account for individual and family-level characteristics. Then, we present results for the three other models, which account for child, family and neighborhood characteristics. Results for the last three models are shown in Table 3. Finally, we present results from bivariate analysis of neighborhood characteristics by immigration status. These results are reported in Table 4.

Descriptive Statistics

[1] The interclass correlation coefficient is calculated by summing the between and within neighborhood components produced by the one-way ANOVA with random effects and dividing the sum by the between neighborhood variance.

Table 1 shows that first-generation youth had higher internalizing scores compared to second- and third-generation youth at Wave 1 and Wave 2. Results from an ANOVA test indicate that differences between the three groups in Wave 1 and Wave 2 internalizing behavior scores are significantly different ($F(2, 828)= 5.32$, $p <.05$, $F(2, 828) =3.39$, $p < .05$, respectively). Significantly more Mexican adolescents were represented in the data compared to Puerto Rican and "other" Hispanic adolescents; this was true across immigrant generations (χ^2 (4, N=1040) = 13.98, $p<.01$). Second-generation adolescents were significantly younger than their counterparts ($F(2, 828) = 3.22$, $p<.05$). First-generation adolescents had lower income-to-needs ratios compared to the other two groups of adolescents. Results from an ANOVA indicate that differences between the three groups are significantly different ($F(2, 907) = 41.97$, $p < .001$). The majority of first- and second-generation adolescents had parents with less than a high school education. In contrast, 52 percent of third-generation adolescents had mothers with more than a high school education (χ^2 (8, N=1040) = 117.28, $p<.001$). With regard to marital status, the majority of adolescents had parents who were married. First-generation adolescents were more likely to have married mothers (χ^2 (4, N=1040) = 12.86, $p<.05$). First-generation adolescents had the highest proportion of depressed mothers, as measured by the CIDI-SF. In summary, first-generation adolescents had higher levels of internalizing behaviors, were more likely to live in a two-parent household, and were more likely to live with a mother without a high school education, and more likely to have a mother who was depressed compared to their counterparts.

Table 2 provides the distribution of adolescents living in the various neighborhoods by immigrant generation. "Low" and "High" neighborhoods were creating by dividing the data into the bottom and top 50% for each neighborhood variable. "Low" Concentrated Disadvantage ranges from -1.38 to -.17. "High" Concentrated Disadvantage includes factor scores from -.16 to

3.72. "Low" Immigrant Concentration ranges from -1.24 to -.28 and "High" Immigrant Concentration ranges from -.24 to 2.27. "Low" Residential Stability ranges from -2.16 to -.08 and "High" Residential Stability ranges from -.07 to 2.32. An equal proportion of immigrant generation adolescents live in low and high concentrated disadvantaged neighborhoods. The majority of youth in our study, regardless of immigration status, live in "high" immigrant neighborhoods. However, compared to first- and second-generation adolescents, third-generation adolescents are less likely to live in high immigrant neighborhoods (χ^2 (2, *N*=1040) = 26.68, p < .001). A higher proportion (58% versus 42%) of first-generation adolescents lived in "low" than "high" residential stable neighborhoods. A lower proportion (41% versus 59%) of third-generation adolescents lived "low" than "high" stable neighborhoods. An equal proportion of second-generation immigrants live in low and high residential stable neighborhoods (χ^2 (2, *n*=1040) =11.81, p < .01).

Results from the Unconditional Model

Results for the unconditional model, also referred to as the ANOVA model, indicate that there was significant between-neighborhood variation in adolescent's internalizing behaviors, with an ICC equaling 6 percent. This variation allows for further exploration of neighborhood effects.

Results from the Level-One Models

Results from the level-one models are presented in Table 3. The first model takes into account child characteristics, such as immigration status, age and gender. The second model adds all family covariates and initial internalizing scores.

In Model 1, first-generation children's internalizing scores were .20 standard deviations higher than third-generation adolescent's scores (ß = .20, p<.05). Older adolescent also had significantly higher (ß = .06, p<.05) internalizing scores.

In Model 2, the immigrant status effect persists even though it is reduced somewhat. First-generation adolescents have significantly higher (ß =.13, p<.05) internalizing scores compared to third-generation adolescents even after controlling for family characteristics and Wave 1 internalizing behavior scores. Also, as expected, adolescent's internalizing scores at Wave 1 are significantly (ß = .40, p < .001) correlated with internalizing scores at Wave 2. Adolescents of mothers with more education have lower internalizing scores (ß = -.19, p< .05). Adolescents of depressed mothers were significantly more likely (ß = .34, p < .001) to have higher internalizing behavior scores compared to adolescents of non-depressed mothers.

Results from the Level-Two Model

Three neighborhood variables were entered into the model: concentrated disadvantage, immigrant concentration, and residential stability. The third model in Table 3 provides the results of this level-two analysis. The effects of youth's internalizing scores at Wave 1, maternal depression, and maternal education continued to be significant predictors of adolescent's internalizing scores at Wave 2. No main effect was found among the three neighborhood predictors. However, the addition of neighborhood-level predictors resulted in the first-generation immigrant coefficient to become non-significant. An interaction between this variable and child immigration status was found. The effect of residential stability on adolescent's internalizing behaviors differed by generation status (ß = .20, p<.05). Second-generation adolescents living in neighborhoods where residential stability was high were more likely to have higher internalizing scores than those in low residential stability neighborhoods. For first-

and third-generation children, residential stability does not make a difference on adolescent's internalizing scores. Figure 1 illustrates this effect. To understand these results, four clusters were created using immigrant concentration and residential stability. Cluster analysis was used because it allows for identification of homogeneous subgroups, which minimizes within-group variation while maximizing between-group variation. Four defined clusters emerged (using K-Means Cluster Analysis in SPSS 2001, a statistical software package). The four clusters were labeled Cluster 1 "High Immigrant Concentration and Medium Residential Stability," Cluster 2 "Low Immigrant Concentration and High Residential Stability," Cluster 3 "Medium Immigrant Concentration and Low Residential Stability," and Cluster 4 "Medium Immigrant Concentration and Residential Stability." "Low" Immigrant Concentration is comprised of the bottom third of the distribution and includes factor scores from -1.24 to -.81. "Medium" Immigrant Concentration is comprised of the middle third distribution of the factor and includes factor scores from -.80 to .57. "High" Immigrant Concentration is comprised of the top third distribution of the factor and includes factor scores from .65 to 2.27. "Low" Residential Stability is comprised of the bottom third of the distribution and include factor scores from -2.16 to -.54. "Medium" Residential Stability is comprised of the middle third distribution of the factor and includes factor scores from -.52 to .49. "High" Immigrant concentration is comprised of the top third distribution of the factor and includes factor scores from .50 to 2.32.

Table 4 shows that immigration status was associated with cluster residence. Half of the first- and second-generation adolescents live in Cluster 1 (High Immigrant Concentration and Medium Residential Stability neighborhoods). And many of the third-generation adolescents do so as well (46%). However, proportionally more third-generation than first- or second-generation adolescents live in Cluster 2 neighborhoods, which is made up of Low Immigrant Concentration

and High Residential Stability neighborhoods. Cluster 3 neighborhoods (medium levels of Immigrant Concentration and low levels of Residential Stability) had proportionally more first-generation adolescents than second-generation adolescents where the reverse was true in Cluster 4 (medium levels of Immigrant Concentration and Residential Stability). Results from the Chi-squared test indicates that these differences are statistically significant (χ^2 (2, N=1040) = 51.54, p < .001). Thus, second-generation adolescents who are in neighborhoods of higher residential stability are also in neighborhoods with relatively higher levels of immigrants.

Discussion

The aim of this study was to explore links for the adolescent's immigration status, child and family-, and neighborhood-level predictors and internalizing behaviors based on parent reports.

Results from the unconditional model indicate that there is significant (6%) between-neighborhood variation, suggesting that differences in the depressive and anxious behaviors of Hispanic adolescents in this study can be explained by neighborhood variation. While the level of variance between neighborhoods for younger adolescents indicates a higher percent of between neighborhood variance (11%) than previously found by members of our research team (see Xue et al., 2005), we did not find any difference between our subsample and the full sample of 9- to 17-year olds that includes African-American and white non-Hispanic adolescents.

Results from the level-one model indicate that first-generation adolescents had significantly higher internalizing behavior scores compared to third-generation adolescents. Similarly, older adolescents were significantly more likely to have higher internalizing behavior scores.

Results from our multilevel model revealed an interaction effect between second-generation adolescents and high residentially stable neighborhoods. Upon further investigation using neighborhood clusters, we found that neighborhoods that have high residential stability had low immigrant concentration. We also found that a higher proportion of third-generation adolescents from our study live in these types of neighborhoods. Conversely, a higher proportion of first- and second-generation adolescents live in neighborhoods where immigrant concentration is at medium or high levels and residential stability is low to medium. Thus, we conclude that residential stability is not beneficial to second-generation adolescents when compared to third generation adolescents for two reasons.

While residential stability has been shown to be an indicator of positive psychological and physical outcomes (Boardman, 2004), there is some evident that residential stability mixed with other neighborhood characteristics (e.g., low neighborhood affluence) is positively associated with poor health outcomes (Browning & Cagney, 2003). Similarly, we found that for second-generation youth in our study, high residential stability mixed with low immigrant concentration was positively associated with worse mental health outcomes. We suggest that second-generation adolescents live between multiple worlds: immigrant parents, immigrant neighborhoods and native-born frame of reference. In other words, second-generation adolescents tend to live between immigrant and native worlds (Suarez-Orozco & Suarez-Orozco, 1995). Unlike first-generation adolescents who were born outside the US, second-generation adolescents are native-born with native-born rights and native-born experiences. However, having at least one immigrant parent separates them from both first-generation adolescents and third-generation adolescents who live in a U.S.-born family. Researchers refer to these adolescents as living within “mixed status parentage” and may experience tension between an

immigrant and native identity. Children of immigrants are often told by their parents how fortunate they are and are given a pretty clear picture of what life in the homeland was like. In comparison, adolescents whose parents are born in the U.S. are less likely to have a family homeland story. Thus, adolescents of mixed U.S.-born and foreign-born may feel both an immigrant and native reference. Living in a place where there is "low" turn over may be perceived as low residential mobility and a more permanent place in limbo.

Another explanation is the city in which these adolescents live. Historically, first-generation adolescents move into 'receiving' neighborhoods that are comprised primarily of other arriving Latino immigrant families and where residential stability is low. However, given economic constraints and other factors, such as immigration status, these high immigrant-low residentially stable neighborhoods tend to be the only choice for arriving families. In contrast, second-generation adolescents move out of these receiving neighborhoods and, we argue, into neighborhoods where there is a mix of immigrant concentration and residential stability, which may reflect their previous, receiving neighborhoods more closely than do low immigrant-high residentially stable neighborhoods. These latter neighborhoods appear to be the most stressful for second-generation adolescents who already live between worlds.

With the exception of one study that mentions the importance of examining the role neighborhoods play in the development of adolescents of immigrants (Fuligni and Yoshikawa, 2003); our examination is the first of its kind. Additional studies are necessary to understand how context affects immigrant adolescent's mental health outcomes. Still, these findings suggest that adolescents of immigrants face multiple risks, including marginalization, often encountered by immigrant populations, and limited neighborhood resources, often found in economically impoverished neighborhoods. Children of immigrants may experience cumulative

disadvantages, which may be manifested through depressive and anxious behaviors. Program development at both the individual and neighborhood level is clearly needed to help adolescents, their families, and their communities ameliorate the negative effects of economic hardship and other stressors that are associated with immigration.

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Table 1

Descriptives Statistics for Sample by Immigrant Generation

Variable	First-generation (n=250)	Second-generation (n=611)	Third-generation (n=179)	Total (N=1040)
Mean Internalizing Score Wave 1				
M (SD)	9.77 (7.31)	9.42 (7.89)	7.51 (7.17)	9.18 (7.66)
ANOVA		$F(2,828)=5.32$, $p<.05$		
Mean Internalizing Score Wave 2				
M (SD)	11.02 (8.73)	10.16 (8.28)	8.64 (7.39)	10.12 (8.27)
ANOVA		$F(2,828)=3.39$, $p<.05$		
Child Characteristics				
Ethnicity (%)				
Mexican	80	77	70	76
Puerto Rican	12	17	25	17
Other Latino	8	6	5	7
Chi-squared		χ^2 (4, N=1040) = 13.99, $p<.01$		
Age				
M (SD)	12.27 (2.41)	11.82 (2.44)	11.85 (2.46)	11.93 (2.44)
ANOVA		$F(2, 1039) =3.22$, $p<.05$		
Girls (%)	45	50	49	49
Chi-squared		χ^2 (2, N=1040) = 3.88		
Parent Characteristics				
Needs to Income Ratio				
M (SD)	.95 (.69)	1.43 (.96)	1.89 (1.28)	1.39(1.01)

Variable	First-generation (n=250)	Second-generation (n=611)	Third-generation (n=179)	Total (N=1040)
ANOVA	$F(2, 907) = 41.97, p<.001$			
Education (%)				
Less than High School	51	40	6	37
Some High School	18	19	26	20
High School Graduate	14	16	16	15
Some Post High School	13	20	41	22
College or More	4	5	11	6
Chi-squared	$\chi^2 (8, N=1040) = 117.28, p<.001$			
Marital Status (%)				
Married	74	67	60	68
Single	14	20	27	19
Partnered	12	13	13	13
Chi-squared	$\chi^2 (4, N=1040) = 12.86, p<.01$			
Maternal Depression (%)	26	20	20	22
Chi-squared	$\chi^2 (2, N=1040) = 2.65$			

Table 2

Neighborhood Composition by Immigrant Generation

Variable	First-generation (n=250)	Second-generation (n=611)	Third-generation (n=179)	Total (N=1040)
Concentrated Disadvantage				
Low	47	50	51	49
High	53	50	49	51
Chi-squared	χ^2 (2, N=1040) = .959			
Immigrant Concentration				
Low	5	7	18	8
High	95	93	82	92
Chi-squared	χ^2 (2, N=1040) =26.68, p<.001			
Residential Stability				
Low	58	51	41	51
High	42	49	59	49
Chi-squared	χ^2 (2, N=1040) = 11.81, p<.01			

Note: "Low" and "High" neighborhoods were creating by dividing the data into the bottom and top 50% for each neighborhood variable. "Low" Concentrated Disadvantage ranges from -1.38 to -.17. "High" Concentrated Disadvantage includes factor scores from -.16 to 3.72. "Low" Immigrant Concentration ranges from -1.24 to -.28 and "High" Immigrant Concentration ranges from -.24 to 2.27. "Low" Residential Stability ranges from -2.16 to -.08 and "High" Residential Stability ranges from -.07 to 2.32.

Table 3

Results from the Family- and Neighborhood-Level Models

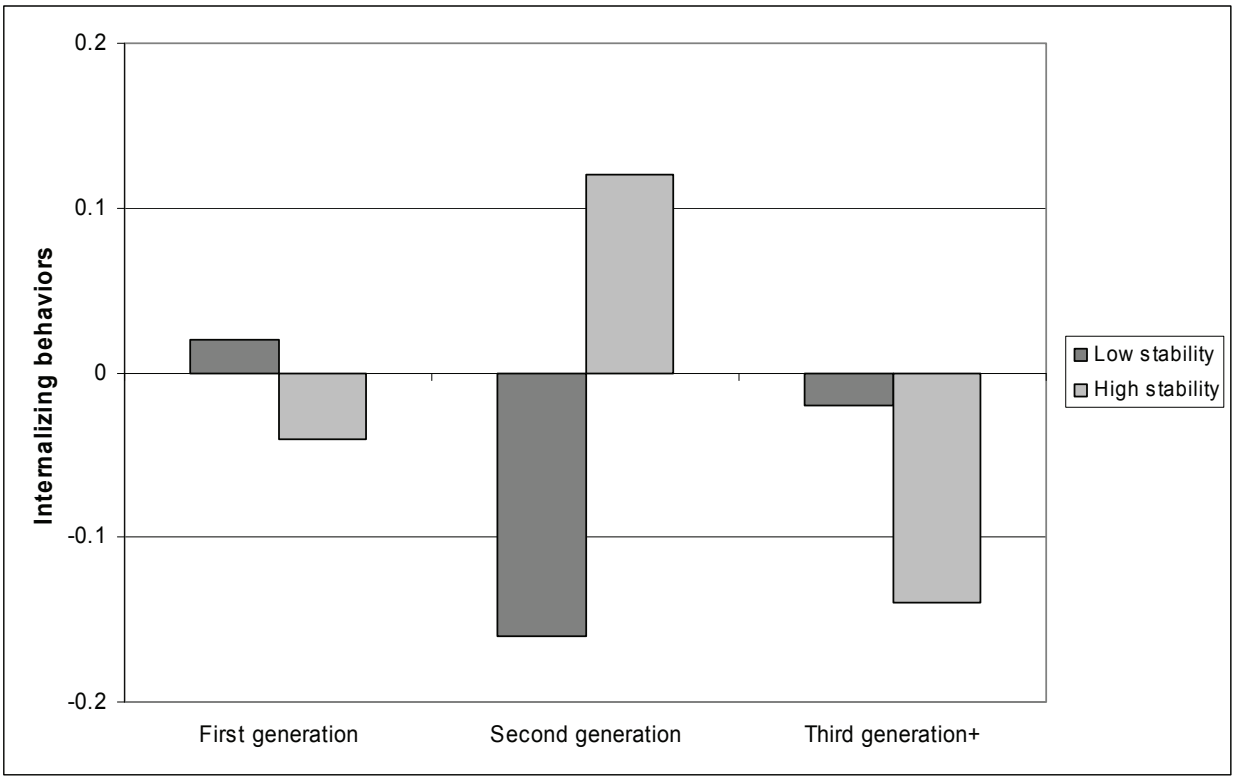
Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)
Intercept	-.17 (.07)*	-.11 (.08)	-.08 (.09)
Concentrated Disadvantage	---	---	-.12 (.11)
Immigrant Concentration	---	---	-.04 (.09)
Residential Stability	---	---	-.06 (.09)
Child Immigrant Generation			
First-Generation	.20 (.08)*	.13 (.07)*	.07 (.10)
Concentrated Disadvantage	---	---	.04 (.15)
Immigrant Concentration	---	---	.07 (.12)
Residential Stability	---	---	.03 (.12)
Second-Generation	.13 (.08)	.07 (.07)	.06 (.08)
Concentrated Disadvantage	---	---	.10 (.12)
Immigrant Concentration	---	---	.00 (.10)
Residential Stability	---	---	.20 (.09)*
Third-Generation	*Omitted*	*Omitted*	*Omitted*
Child Gender			
Male	*Omitted*	*Omitted*	*Omitted*
Female	.07 (.05)	.03 (.04)	.02 (.04)
Child Age (years)	.06 (.03)*	.01 (.02)	.01 (.03)
Wave 1 Internalizing Score		.40 (.03)***	.40 (.04)***

Variable	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)	Model 3 Coefficient (SE)
Family Income			
Income/Needs Ratio		.00 (.03)	-.02 (.03)
Marital Status			
Married		*Omitted*	*Omitted*
Cohabitating		.02 (.08)	.03 (.08)
Single		-.02 (.07)	-.02 (.07)
Maternal Education			
Less than High School		-.13 (.07)	-.12 (.08)
Some High School		.01 (.08)	.01 (.08)
High School		.00 (.09)	.00 (.09)
Beyond High School		*Omitted*	*Omitted*
College		-.19 (.09)*	-.19 (.09)*
Maternal Mental Health			
Depressed		.34 (.07)***	.33 (.07)***
Variance Components			
Between Neighborhood	.05***	.03**	.03**
Within Neighborhood	.80	.63	.62

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

Figure 1

Differential Effect of Neighborhood Residential Stability by Immigrant Generation



Note: Standard Deviations in the y-axis.

Table 4

Neighborhood Clusters by Immigrant Generation

Variable	First-generation (n=250)	Second-generation (n=611)	Third-generation (n=179)	Total (N=1040)
Cluster 1				
High Immigrant Concentration and Medium Residential Stability	59	56	46	55
Cluster 2				
Low Immigrant Concentration and High Residential Stability	1	3	11	4
Cluster 3				
Medium Immigrant Concentration and Low Residential Stability	16	10	7	11
Cluster 4				
Medium Immigrant Concentration and Medium Residential Stability	24	32	35	31

Note: "Low" Immigrant Concentration is comprised of the bottom third of the distribution and include factor scores from -1.24 to -.81. "Medium" Immigrant Concentration is comprised of the middle third distribution of the factor and includes factor scores from -.80 to .57. "High" Immigrant Concentration is comprised of the top third distribution of the factor and includes factor scores from .65 to 2.27. "Low" Residential Stability is comprised of the bottom third of the distribution and include factor scores from -2.16 to -.54. "Medium" Residential Stability is comprised of the middle third distribution of the factor and includes factor scores from -.52 to .49. "High" Immigrant concentration is comprised of the top third distribution of the factor and includes factor scores from .50 to 2.32.