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RELATIONSHIPS BETWEEN FAMILY AND NEIGHBORHOOD INCOME AND FIRST-GENERATION LATINO ADULTS' DEPRESSIVE SYMPTOMS AND Well-BEING

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*This study examines relationships between family and neighborhood income and depressive symptoms, life satisfaction, and financial satisfaction among first-generation immigrant Dominican (*N = *255), Puerto Rican (*N = *242), and Mexican (*N = *212) adults. Results from random intercept regression models revealed family income to be consistently predictive of outcomes across samples. However, this relationship was moderated by neighborhood income. The interaction between family and neighborhood income was related to life satisfaction among Puerto Rican and Mexican samples and to financial satisfaction among all three samples, although the shape of the interactions differed. For lower income Dominican and Puerto Rican adults, living in a higher income neighborhood was associated with* increases *in satisfaction. In comparison, living in a higher income neighborhood was associated with* decreases *in satisfaction among lower income Mexican adults. Access to neighborhood resources and social comparisons are proposed as potential underlying mechanisms.* © *2016 Wiley Periodicals, Inc.*

Of the United States' 40 million immigrants, Latinos make up nearly half (47%) and are one of the nation's fastest growing populations (Motel & Patten, 2012). However,

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there is significant diversity within this group, with the largest percentages of immigrants originating from Mexico (29.4% of all U.S. immigrants), the Caribbean (9.5%), Central America (6.5%), and South America (6.2%; Patten, 2012). Differences in country of origin shape immigration experiences, patterns of settlement, and the process of acculturation–factors that contribute to both economic standing and mental health and well-being. Given these variations, researchers have begun to recognize the importance of examining functioning across Latino groups, finding, for example, that the mental health advantage previously identified among Latino adults relative to non-Latino White adults (Grant et al., 2004; Ortega, Rosenheck, Alegria, & Desai, 2000), seems to be isolated among Mexican samples (Alegria et al., 2008). However, little is known about how the relationship between income, mental health, and well-being may vary for different Latino immigrant groups.

Of the commonly used indicators of socioeconomic status (income, educational attainment, and occupational prestige), income has been shown to be the most robust predictor of individual health (Duncan, Daly, McDonough, & Williams, 2002). Lower income, at both family and neighborhood levels, has been linked to increases in psychological distress (Xu, 2011) and the occurrence of medical disorders and suicide attempts (Sareen, Afifi, McMillan, & Asmundson, 2011), as well as decreases in life (Barger, Donohoe, & Wayment, 2009) and financial satisfaction (Hsieh, 2001). Moreover, recent work has found the relationship between neighborhood income and depression to vary as a function of family income (Aguilera, Leykin, Adler, & Munoz, 2012). Given that economic factors play an important role in decisions around immigration (Borjas, 1989) and immigrant adaptation (Thomas, 1995), it may be that income, at both family and neighborhood levels, is an important predictor of depressive symptoms and well-being for first-generation immigrants.

This study addresses several gaps in the literature by considering whether family and neighborhood income are related to depressive symptoms, life satisfaction, and financial satisfaction among three groups (of Dominican, Puerto Rican,[1] and Mexican origins) of first-generation Latino adults. First, we examine both independent and interdependent relationships between family and neighborhood income and individual outcomes. This approach allows us to consider how family income *in the context of neighborhood income* is related to individual outcomes. Second, by examining the relationship between income and depressive symptoms and well-being *within* each of these distinct immigrant groups, we recognize that diversity of experience may differentially shape patterns of adaptation and functioning across Latino immigrant groups. Finally, we focus on both depressive symptoms and well-being, exploring the role of income in both negative and positive domains of individual functioning.

Income and Immigrant Mental Health and Well-Being

Having a lower income has consistently been linked to worse outcomes in adulthood, particularly in the domains of mental health and well-being (e.g., Sareen et al., 2011; Pinquart & Sorensen, 2000). These relationships may be driven by blocked access to

[1]Because Puerto Ricans are U.S. citizens, they are technically not immigrants. However, some have argued that given the cultural and language differences between Puerto Rico and the mainland United States, the experience of Puerto Rican migration is likely to resemble that of other immigrant groups (e.g. Landale et al., 1999). Therefore, for the purposes of consistency, Puerto Rican migrants will be referred to as immigrants in this article.

resources, denying individuals access to basic human needs, and psychological factors, such as exposing individuals to chronic stressors or by providing a measure against which individuals might evaluate themselves (Diener, Sandvik, Seidlitz, & Diener, 1992). In addition to these individual-level influences, experimental evidence has demonstrated the detrimental influence of lower neighborhood income on adult mental health and well-being (Ludwig et al., 2012).

It may also be that the relationship between family income and individual functioning varies as a function of neighborhood income. Research on relative social position highlights the influence of social status on psychological functioning (Adler & Matthews, 1994; Marmot, Kogevinas, & Elston, 1987). As such, having a lower (or higher) income than one's neighbors may produce increases (or decreases) in psychological stress, with implications for depressive symptoms and well-being.

Researchers have tested this hypothesis by using the interaction between family and neighborhood income to predict mental health and well-being (Aguilera et al., 2012; Aneshensel et al., 2007; Henderson et al., 2005). Keeping with the relative social position hypothesis, Aguilera et al. (2012) found that higher income individuals were less likely to be depressed when living in lower income communities. However, (Roy, Godfrey, & Rarick, 2015) found a reverse pattern of effects, in which lower income individuals reported better mental health when living in higher income neighborhoods. The authors explain this unexpected pattern of results by arguing that different social comparisons may serve different psychological purposes (evaluative vs. affiliation) depending on the direction (downward vs. upward) of the comparison.

Family income and neighborhood income and the intersection between the two may be particularly salient for first-generation immigrants. Given that many voluntary migrations are motivated by opportunity seeking, or the desire to advance oneself in terms of earnings, education, or employment (Borjas, 1989), economic standing may be an important marker of success. In addition, the structure and resources of the community of reception are important determinants of immigrant adaptation and well-being (Portes & Rumbaut, 2001). Finally, the influence that economic standing, at both family and neighborhood levels, has on mental health or well-being may intensify with years spent in the host country, as expectations are either achieved or unmet.

Variation in Immigration Experiences and Adaptation

Why might economic standing and mental health and well-being differ across Dominican, Puerto Rican, and Mexican first-generation adults? Because Puerto Ricans are U.S. citizens, they do not face many of the same immigration challenges that Dominican and Mexican immigrants experience. The "healthy migrant" hypothesis argues that the health advantage of Latino adults is a function of the healthiest individuals choosing to emigrate (Abraido-Lanza, Dohrenwend, Ng-Mak, & Turner, 1999). Difficulties involved in immigrating may also shape the characteristics of the individuals who choose to imigrate, with less healthy individuals being less likely to imigrate when challenges are greater.

The histories of immigration also vary across these three groups. Imigration from the Dominican Republic to the United States began in the latter half of the 20th century (Garcia Coll & Marks, 2009). In contrast, there has been a long history of Puerto Rican and Mexican immigration to the United States, both starting in the early 1900s (Innis-Jimenez, 2013; Sanchez Korrol, 1983). Given their longer histories of immigration, Mexican and

Puerto Rican communities in the United States are likely to be more established in terms of structure and resources, facilitating the healthy adaptation of more recent immigrants (Portes & Rumbaut, 2001).

The Current Study

This work bridges two important literatures by examining the relationship between family and neighborhood income and depressive symptoms and well-being among Dominican, Puerto Rican, and Mexican adults. In this way, we contribute to the literature exploring the influence of income at different contextual levels as well as research examining predictors of depressive symptoms and well-being across Latino immigrant groups. Specifically, we examine the following questions. (a) How are family and neighborhood income related to depressive symptoms, life satisfaction, and financial satisfaction in each Latino group? We expect both family and neighborhood income to be negatively related to depressive symptoms and positively related to life and financial satisfaction but expect family income to be more strongly related to outcomes than neighborhood income. (b) Does neighborhood income moderate the relationship between family income and outcomes in each Latino group? Given that previous work has found differing patterns of results, we do not have specific hypotheses about the influence of family income in the context of neighborhood income.

METHODS

Sample

Data for this study came from the Survey of Minority Groups, a study of midlife development in the United States (MIDUS) conducted between 1995 and 1996. Although these data were sampled almost 20 years ago, we chose to use them for three important reasons. First, to our knowledge, this is one of the only large-scale data collection efforts that purposefully sampled Latinos from specific Latino groups and collected information on income at both family and neighborhood levels. This makes the data uniquely suited to examine the influence of income across contextual levels both between and within Latino groups.

Second, decades of research have shown family income and, to a lesser degree, neighborhood income to be consistent predictors of individual health across a variety of outcomes (Adler & Ostrove, 1999; Diez Roux & Mair, 2010). The consistency of these findings increases our confidence that our findings will continue to be relevant despite the age of the data. Finally, the percentage of Latinos in New York City and Chicago grew between 1990 and 2010–from 23% to 29% in New York City and from 14% to 19% in Chicago (Pew Research Center, 2013). The growth of the Latino population in these urban centers suggests that the research questions examined here will become increasingly relevant as this subset of the population continues to grow.

The study sample comprised men and women (aged 25 years and older) residing in Chicago and New York City. The sample includes three first-generation Latino immigrant groups: Dominicans ($N = 255$), Puerto Ricans ($N = 242$), and Mexicans ($N = 212$). Mexican respondents were sampled exclusively from Chicago; Dominican respondents were sampled exclusively from New York City; and Puerto Rican respondents were sampled

Table 1. Sample Characteristics

	%/Mean(SD)			
	Full sample (N = 709)	*Dominican (N = 255)*	*Puerto Rican (N = 242)*	*Mexican (N = 212)*
Individual level				
Female	49.1%	43.5%	51.7%	52.8%
Have partner[a]	54.9%	40.0%	48.3%	80.2%
Working[a]	51.8%	52.8%	50.4%	69.5%
High school diploma or above[a]	41.8%	47.7%	46.8%	28.7%
Parent (child < 18)[a]	58.4%	59.3%	46.3%	71.2%
Age[b]	43.47 (12.92)	42.66 (12.07)	47.72 (13.94)	39.61 (11.22)
Years in neighborhood[b]	9.89 (9.57)	10.47 (8.96)	11.99 (11.34)	6.82 (7.00)
Years in United States[b]	22.54 (13.23)	18.95 (11.72)	30.71 (13.41)	17.71 (10.12)
English proficiency[b]	1.80 (.97)	1.62 (.88)	2.24 (1.06)	1.52 (.79)
Family income[c]	$20,955 ($16,876)	$18,574 ($15,740)	$22,532 ($19,828)	$22,003 ($13,955)
Neighborhood level				
No. people in neighborhood[c]	1,585 (722)	1,765 (624)	1,531 (799)	1,429 (697)
% Children < 18[c]	39.31 (13.23)	42.36 (10.24)	38.14 (15.16)	36.99 (13.42)
% High school or higher[c]	23.35 (6.84)	21.12 (4.57)	24.04 (6.79)	25.24 (8.31)
% Married[d]	37.97 (10.06)	34.35 (9.10)	38.41 (10.02)	41.82 (9.73)
% Employed	89.06 (5.25)	88.55 (4.79)	89.15 (5.85)	89.56 (5.03)
% African American[d]	16.41 (19.29)	32.40 (16.52)	13.94 (17.08)	0 (0)
% Dominican[d]	13.42 (18.95)	31.33 (19.63)	6.30 (9.98)	0 (0)
% Mexican[d]	13.06 (22.08)	8.60 (1.65)	8.28 (15.22)	33.18 (27.48)
% Puerto Rican[d]	21.77 (20.37)	23.74 (19.56)	29.64 (22.17)	10.42 (12.86)
% White[d]	28.10 (23.32)	16.38 (8.90)	28.76 (23.08)	41.46 (27.85)
Median neighborhood income	$23,621 ($8,494)	$22,632 ($7,235)	$24,345 ($9,962)	$23,984 ($7,987)

Note. SD = standard deviation.
[a]Chi-square tests indicated significant differences between Mexican and Dominican/Puerto Rican groups.
[b]ANOVAs and post hoc comparisons indicated significant differences between Puerto Rican and Dominican/Mexican groups.
[c]ANOVAs and post hoc comparisons indicated significant differences between Dominican and Puerto Rican/Mexican groups.
[d]ANOVAs and post hoc comparisons indicated significant differences between all groups.

equally from both cities. All respondents were asked whether they were born in the United States. Individuals who responded "no" were considered to be first-generation immigrants and make up the current study sample. Sample descriptives of the full study sample ($N = 709$) and each group are provided in Table 1.

Study participants were sampled from 113 census block groups, with an average of 6.27 (standard deviation [*SD*] = 4.69) respondents per block group. In each city, the sample design involved the prestratification of block groups (i.e., neighborhoods) by ethnic and economic characteristics based on 1990 Census data. Block groups were categorized according to whether they had high or low concentrations of each of the three target ethnic groups and whether median household income was higher or lower than the median household income for each respective ethnic group in the city. After stratification, block groups were randomly selected and interviewers screened residents door to door and administered the survey face to face.

Measures

Predictors. Respondents indicated *annual family income* in one of 36 categories, with the size of the category getting larger at the upper end of the distribution. To create a continuous variable, each individual was assigned the midpoint of his or her specified income category. Data from the 1990 census were used to create *neighborhood income,* which is the median household income of residents in the respondents' census block group. Both income variables were divided by 1,000 to avoid very small coefficients.

Outcomes. Three outcomes were examined in these analyses: depressive symptoms, life satisfaction, and financial satisfaction. Subjective well-being refers to an individual's appraisal of one's life circumstances using both affective and objective information (Bramston, 2002; Diener, 1984) and is commonly evaluated using measures of global and/or domain-specific satisfaction (de Quandros-Wander, McGillivray, & Broadbent, 2014). In the current study, we use measures of global life satisfaction and domain-specific financial satisfaction (given its relevance to the predictors of interest). Selected items include both affective and objective ratings. Life satisfaction and financial satisfaction were z-scored to facilitate scale creation. Correlations between the outcomes ranged from −.27 to .44. This indicates that the scales shared between 7% and 19% of their variance and although correlated still represent conceptually distinct constructs.

Depressive symptoms. A nine-item count of depressive symptoms was used (Dominican $\alpha = .93$; Puerto Rican $\alpha = .94$; Mexican $\alpha = .90$), comprising items from the Composite International Diagnostic Interview Short Form (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998). Participants gave yes/no answers (0 = no, 1 = yes) to whether they had experienced any of the nine symptoms in the previous 12 months (e.g., During the past 12 months, was there ever a time when you felt sad, blue, or depressed for two weeks or more in a row?).

Life satisfaction. Three items (Dominican $\alpha = .80$; Puerto Rican $\alpha = .87$; Mexican $\alpha = .80$) were used to measure life satisfaction: "How would you rate your life overall these days?" (0 = worst possible to 10 = best possible); "How much thought and effort do you put into your life these days?" (0 = none to 10 = very much); and "At present, how satisfied are you with your life?" (1 = not at all to 4 = a lot).

Financial satisfaction. Three items (Dominican $\alpha = .78$; Puerto Rican $\alpha = .73$; Mexican $\alpha = .75$) were used to assess financial satisfaction: "How would you rate your financial situation these days?" (0 = worst possible to 10 = best possible); "In general, would you say you (and your family living with you) have 1 = more money than you need, 2 = just enough for your needs, 3 = not enough to meet your needs?" (reverse-coded); and "How difficult is it for you (and your family) to pay your monthly bills?" (1 = very difficult to 4 = not at all difficult).

Individual-level covariates. A set of demographic variables were included in all models to adjust for individual differences: gender; age; educational attainment (high school diploma or above); current employment status; relationship status; parental status; years in neighborhood, years in the United States, and English proficiency ("When you are thinking to yourself, what language do you usually think in?"; 1 = Spanish only to 5 = only English). Because Puerto Ricans were the only group to be sampled in both New

York City and Chicago, city was included only as a covariate in analyses using the Puerto Rican sample.

Neighborhood-level covariates. A set of neighborhood-level demographic characteristics from the 1990 census were also included in all models: number of individuals living in the block group (in hundreds); percentage of households with children younger than 18 years; percentage of people older than 18 years with a high school degree or GED; percentage of people older than 15 years who are married and with their spouse present; percentage of people older than 15 years who are employed; and percentage of people who are White, Mexican, Puerto Rican, Dominican and African American. Percent Dominican and percent African American were not included in analyses of the Mexican sample because of underrepresentation.

RESULTS

Measurement Equivalence

To ensure the validity and reliability of the outcomes across immigrant groups, we examined the measurement invariance of the outcomes across all three groups. Measurement invariance was established by comparing a confirmatory factor model in which item factor loadings were constrained to be equal across groups (metric invariance) to an unconstrained model in which these were allowed to vary freely. Invariance was established if there was no significant difference in model fit between the constrained and unconstrained models. The model in which item loadings were constrained to be the same across groups was not a significantly worse fit than the unconstrained model for life satisfaction, $\chi^2\Delta(4) = 3.94$, nonsignificant (ns), or financial satisfaction, $\chi^2\Delta(4) = 5.54$, ns, suggesting that both measures have full metric invariance across groups. In the models testing depressive symptoms, one item loading had to be unconstrained to achieve a nonsignificant change in fit, $\chi^2\Delta(6) = 10.51$, ns, suggesting that this measure has partial strong invariance across groups.

Sample Descriptives

We ran preliminary analyses to consider demographic differences between the three groups (presented in Table 1). To assess whether low- and high-income individuals were equally distributed across low- and high-income neighborhoods, we examined correlations between family income and neighborhood income in each of the three samples. We found that although family and neighborhood income were not significantly correlated among Mexican (.04) and Dominican (.08) respondents, there was a moderate correlation among Puerto Rican respondents (.29). Although this indicates that higher income Puerto Rican respondents have a slight tendency to live in higher income neighborhoods, only about 8% of the variance in neighborhood income can be explained by family income.

The Relationship Between Family and Neighborhood Income and Outcomes

Primary analyses were conducted in Mplus (version 6) using full information maximum likelihood (FIML). FIML estimates statistical parameters from data with missing values,

allowing retention of the complete sample for all analyses. FIML provides less-biased parameter estimates than other procedures, even when data are not missing completely at random (Graham, 2009). We estimated random intercept models using the TYPE = TWOLEVEL option in Mplus, to specify a model for each level of the multilevel data, thereby modeling the nonindependence of observations due to clustering sampling (individuals within neighborhoods). To examine the relationship between income and outcomes *within each group*, separate models were run within each of the immigrant groups, predicting each of the three outcomes. In the case of "depressive symptoms," a zero-inflated Poisson regression was estimated to take into account the fact that the outcome is a count variable with an excess of zero counts.

After adjusting for neighborhood income and the set of covariates, family income was positively related to life satisfaction among Dominican respondents ($b = .08$ (.03), $p < .01$) and to financial satisfaction among Dominican, $b = .21$ (.04), $p < .01$, Puerto Rican, $b = .14$ (.02), $p < .01$, and Mexican, $b = .16$ (.05), $p < .01$, respondents. However, family income was not related to depressive symptoms. In contrast, after controlling for family income and the set of covariates, neighborhood income was positively related to depressive symptoms among Mexican respondents, $b = .35(.11)$, $p < .01$.

The Intersection Between Family and Neighborhood Income

Next, we added a family by neighborhood income interaction term to each model Results are presented in Tables 2, 3, and 4. The interaction was predictive of life satisfaction in the Puerto Rican and Mexican samples (Tables 3 and 4, respectively) and financial satisfaction with the Dominican, Puerto Rican, and Mexican samples (Tables 2, 3, and 4, respectively). To examine the nature of these relationships, the interactions were graphed at +/− one standard deviation for each of the predictors (Figures 1, 2, and 3; interactions for Dominican, Puerto Rican, and Mexican samples respectively) and simple slopes calculated at +/− one standard deviation were tested to determine if they were different from 0.

The relationships for both life and financial satisfaction are presented in the figures for the Puerto Rican (Figure 2) and Mexican (Figure 3) samples; the relationship for life satisfaction is represented in grey and the relationship for financial satisfaction is represented in black. Among Puerto Rican adults with low family income, a unit increase in neighborhood income was associated with a .34 increase in perceptions of life satisfaction (given that the outcomes were z-scored, this reflects a difference of over a quarter of a standard deviation), $t(218) = 3.63$, $p < .01$, and a .15 increase in financial satisfaction, $t(218) = 1.99$, $p = .04$. A similar pattern was also seen among low-income Dominican respondents, although this simple slope did not reach statistical significance, $t(218) = 1.45$, $p = .15$.

In contrast, among Mexican adults with low family income, a unit increase in neighborhood income was associated with a .24 *decrease* in perceptions of life satisfaction, $t(191) = -2.20$, $p = .03$ and detriments in financial satisfaction (although this simple slope did not reach statistical significance), $t(191) = -1.50$, $p = .13$. For adults with high family income in all three groups, neighborhood income was not significantly related to life or financial satisfaction. Taken together, these findings suggest that neighborhood income may play a protective role for low-income Puerto Rican and Dominican adults when it comes to life and financial satisfaction. In contrast, neighborhood income may be detrimental for low-income Mexican adults' life and financial satisfaction.

Table 2. Interactions Between Family and Neighborhood Income Predicting Outcomes for Dominican Sample

	Depressive symptoms			*Life satisfaction*			*Financial satisfaction*		
	B	*SE*	*95% CI*	*B*	*SE*	*95% CI*	*B*	*SE*	*95% CI*
Family income	−.039	.131	[−.296, .217]	.079	.027**	[.027, .132]	.214	.033**	[.280, .301]
Neighborhood income	.095	.182	[−.262 .452]	.034	.104	[−.170, .238]	.083	.106	[−.125, .291]
Family by neighborhood income	−.014	.101	[−.212 .184]	−.013	.040	[−.091, .066]	−.059	.030*	[−.001, .017]
New York City	–	–	–	–	–	–	–	–	–
Female	−.491	.175**	[−.833,−.149]	−.125	.120	[−.361, .111]	−.029	.089	[−.203, .145]
Partner	.139	.199	[−.252, .529]	.299	.147*	[.011, .587]	.219	.094*	[.036, .402]
Employed	−.301	.197	[−.688, .086]	.421	.118**	[.190, .652]	.379	.095**	[.193, .565]
Parent	−.123	.184	[−.482, .237]	.159	.098	[−.032, .351]	.033	.093	[−.150, .215]
High school or above	−.058	.153	[−.358, .241]	.089	.129	[−.164, .341]	.036	.101	[−.161, .234]
Age	.004	.006	[−.008, .016]	−.011	.006	[−.024, .001]	−.003	.005	[−.012, .006]
Years in neighborhood	.008	.006	[−.003, .018]	.007	.008	[−.008, .022]	.009	.007	[−.004, .023]
Years in United States	−.003	.004	[−.011, .006]	−.007	.008	[−.023, .008]	−.003	.005	[−.013, .008]
English proficiency	−.187	.116	[−.415, .040]	.110	.075	[−.037, .257]	.043	.068	[−.091, .176]
Random intercept	1.769	.196**	[1.384, .067]	−.550	.104	[−.775,−.325]	−.584	.122**	[−.823, .291]
Number of people in neighborhood	.022	.023	[−.022, .035]	−.038	.027	[−.170, .238]	−.024	.010*	[−.044, −.004]
% Children < 18	.012	.012	[−.011, .066]	.002	.009	[−.090, .015]	−.001	.003	[−.007, .006]
% High school degree	−.005	.036	[−.076, .069]	.013	.019	[−.015, .020]	−.003	.014	[−.031, .025]
% Married	.021	.024	[−.026, .011]	−.003	.009	[−.023, .049]	−.005	.008	[−.020, .010]
% Employed	−.028	.020	[−.066, .144]	−.005	.012	[−.021, .015]	−.004	.009	[−.022, .015]
% Mexican	.000	.073	[−.143, .013]	–	–	–	.019	.030	[−.039, .077]
% Puerto Rican	−.009	.011	[−.032, .008]	−.008	.006	[−.020, .005]	−.007	.005	[−.016, .002]
% White	−.013	.011	[−.034, .010]	.003	.011	[−.018, .024]	.000	.007	[−.014, .014]
% Dominican	−.006	.008	[−.021, .011]	.004	.006	[−.007, .015]	−.005	.005	[−.014, .004]
% African American	−.007	.010	[−.026, .067]	−.008	.004*	[−.016, .000]	.001	.004	[−.006, .008]

Note. SE = standard error; CI = confidence interval. Percent Mexican was removed in model predicting life satisfaction because of singularity of variance.
**$p < .01$. *$p < .05$.

DISCUSSION

This study examines the relationship between family and neighborhood income and depressive symptoms and well-being among Dominican, Puerto Rican, and Mexican first-generation immigrants. Although family income was predictive of outcomes across groups, we also found the interaction between family and neighborhood income to be consistently related to outcomes. Specifically, the interaction between family and neighborhood income was predictive of life and financial satisfaction, although the nature of the relationship varied across groups. For low-income Puerto Rican respondents, neighborhood income was positively related to life and financial satisfaction. Similarly, among

Table 3. Interactions Between Family and Neighborhood Income Predicting Outcomes for Puerto Rican Sample

	Depressive symptoms			*Life satisfaction*			*Financial satisfaction*		
	B	*SE*	*95% CI*	*B*	*SE*	*95% CI*	*B*	*SE*	*95% CI*
Family income	−.057	.048	[−.150, .037]	.021	.045	[−.067, .110]	.158	.024**	[.110, .206]
Neighborhood income	−.093	.101	[−.292, .105]	.210	.085*	[.044, .376]	.094	.062	[−.028, .216]
Family by neighborhood income	−.041	.050	[−.140, .057]	−.088	.020**	[−.127, −.050]	−.041	.015**	[−.070, −.012]
New York City	.275	.224	[−.164, .713]	−.473	.333	[−1.126, .180]	−.016	.166	[−.340, .309]
Female	−.006	.105	[−.212, .200]	−.048	.099	[−.242, .147]	−.071	.085	[−.238, .095]
Partner	−.018	.105	[−.224, .187]	.087	.121	[−.149, .323]	.287	.110**	[.072, .503]
Employed	−.137	.103	[−.338, .064]	.381	.151*	[.086, .676]	.205	.091*	.382]
Parent	−.222	.099*	[−.416, −.029]	−.057	.140	[−.331, .218]	−.466	.108**	[−.678, −.254]
High school or above	−.109	.079	[−.264, .046]	.183	.135	[−.082, .448]	.210	.072**	[.069, .352]
Age	−.002	.004	[−.009, .005]	−.015	.007*	[−.029, −.001]	−.009	.005	[−.018, .000]
Years in neighborhood	−.009	.004*	[−.017, −.002]	.006	.007	[−.007, .019]	.002	.006	[−.010, .014]
Years in United States	.001	.006	[−.010, .012]	−.003	.006	[−.015, .009]	.005	.004	[−.002, .012]
English proficiency	.069	.044	[−.017, .155]	.099	.065	[−.028, .226]	.028	.037	[−.045, .101]
Random intercept	1.814	.154**	[1.511, 2.116]	−.102	.219	−.051	.145		[−.335, .233]
Number of people in neighborhood	−.006	.007	[−.020, .008]	.006	.007	[−.009, .020]	−.001	.004	[−.009, .007]
% Children < 18	.007	.003 *	[.001, .013]	−.001	.005	[−.012, .009]	.004	.004	[−.004, .011]
% High school degree	−.021	.014	[−.049, .006]	.029	.011**	[.008, .051]	.014	.007*	[.000, .028]
% Married	−.003	.008	[−.019, .012]	−.010	.010	[−.030, .010]	−.002	.004	[−.011, .006]
% Employed	−.004	.006	[−.016, .007]	.003	.012	[−.021, .026]	.001	.007	[−.012, .014]
% Mexican	−.005	.005	[−.015, .005]	−.001	.005	[−.010, .008]	.003	.004	[−.005, .010]
% Puerto Rican	−.002	.005	[−.011, .007]	.004	.006	[−.007, .015]	.003	.003	[−.003, .009]
% White	.012	.004**	[.004, .019]	−.005	.004	[−.014, .004]	.005	.003	[−.001, .010]
% Dominican	−.005	.006	[−.016, .006]	.006	.007	[−.008, .020]	−.001	.004	[−.008, .006]
% African American	−.003	.006	[−.014, .008]	.003	.007	[−.010, .017]	.003	.004	[−.005, .011]

Note. SE = standard error; CI = confidence interval.
** $p < .01$. * $p < .05$.

low-income Dominican respondents, neighborhood income was positively related to financial satisfaction. In contrast, for low-income Mexican respondents, neighborhood income was negatively related to life and financial satisfaction.

While the interaction between family and neighborhood income was consistently predictive of life and financial satisfaction, the nature of the relationship differed across groups. For Puerto Rican adults, neighborhood income was positively related to life and financial satisfaction, but only among those with lower family income. A similar pattern was found for Dominican adults in relation to financial satisfaction. For these two groups, the findings indicate that living in a higher income neighborhood provides a buffer

Table 4. Interactions Between Family and Neighborhood Income Predicting Outcomes for Mexican Sample

	Depressive symptoms			*Life satisfaction*			*Financial satisfaction*		
	B	*SE*	*95% CI*	*B*	*SE*	*95% CI*	*B*	*SE*	*95% CI*
Family income	−.091	.057	[−.203, .020]	.063	.034	[−.004, .130]	.184	.036**	[.113, .254]
Neighborhood income	.385	.127**	[.136, .634]	−.080	.088	[−.253, .092]	−.045	.086	[−.214, .124]
Family by neighborhood income	.102	.068	[−.031, .236]	.108	.040**	[.031, .186]	.096	.045*	[.008, .183]
New York City	–	–	–	–	–	–	–	–	–
Female	−.234	.196	[−.619, .150]	−.128	.101	[−.326, .070]	−.010	.084	[−.175, .155]
Partner	−.712	.261**	[−1.224, −.201]	.180	.121	[−.056, .417]	.204	.157	[−.103, .512]
Employed	−.315	.189	[−.686, .056]	.175	.092	[−.005, .355]	.350	.105**	[.145, .555]
Parent	.154	.186	[−.211, .519]	.036	.124	[−.207, .278]	−.061	.106	[−.269, .146]
High school or above	.094	.185	[−.269, .457]	.151	.118	[−.079, .382]	.086	.106	[−.122, .293]
Age	.035	.009**	[.018, .052]	−.007	.007	[−.022, .007]	−.006	.007	[−.020, .007]
Years in neighborhood	−.035	.011**	[−.057, −.013]	.000	.008	[−.015, .016]	.011	.010	[−.009, .031]
Years in United States	−.019	.009*	[−.036, −.002]	.012	.007	[−.001, .025]	.000	.006	[−.011, .012]
English proficiency	.217	.129	[−.037, .470]	.039	.075	[−.108, .186]	−.042	.061	[−.163, .078]
Random intercept	2.086	.286**	[1.527, 2.646]	−.145	.088	[−.408, .117]	−.085	.173	[−.423, .253]
Number of people in neighborhood	−.017	.012	[−.040, .005]	.010	.007	[−.003, .024]	.003	.006	[−.010, 0.016]
% Children < 18	.019	.011	[−.002, .040]	−.003	.006	[−.016, .009]	−.014	.008	[−.030, 0.002]
% High school degree	−.008	.011	[−.030, .014]	.014	.008	[−.001, .029]	.006	.007	[−.008, 0.019]
% Married	−.036	.015*	[−.064, −.007]	.004	.009	[−.013, .021]	.021	.012	[−.002, 0.044]
% Employed	−.018	.025	[−.067, .030]	−.004	.012	[−.027, .019]	.000	.014	[−.027, 0.027]
% Mexican	.014	.006*	[.002, .025]	.001	.004	[−.007, .010]	.000	.005	[−.009, 0.008]
% Puerto Rican	−.001	.009	[−.017, .016]	.002	.007	[−.011, .015]	.002	.007	[−.011, 0.014]
% White	.014	.008	[−.001, .030]	−.005	.005	[−.014, .004]	−.010	.008	[−.026, 0.007]
% Dominican	–	–	–	–	–	–	–	–	–
% African American	–	–	–	–	–	–	–	–	–

Note. SE = standard error; CI = confidence interval.
**$p < .01$. *$p < .05$.

against the otherwise detrimental strains of low economic status. Having neighbors who are economically better off may contribute to the overall quality of the neighborhood and the availability of resources and services, therefore reducing some of the daily stressors lower income individuals face. However, social comparisons could also be at play. In this case, lower status individuals may affiliate themselves with their higher status neighbors and draw favorable conclusions regardless of actual economic standing (i.e., "These are my peers. They have been financially successful. Therefore I have too.")

In comparison, among Mexican adults with lower family incomes, neighborhood income was *negatively* related to life and financial satisfaction. These results lend support to the relative social position hypothesis, which suggests that lower status individuals living

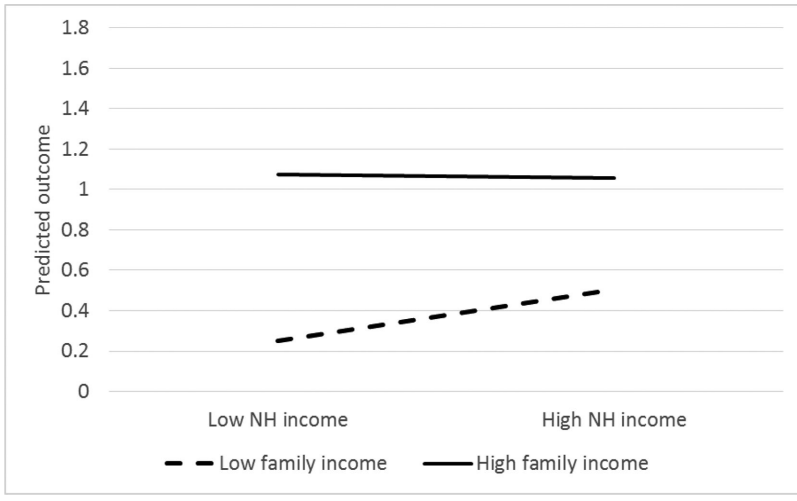

Figure 1. Interaction between family income and neighborhood income predicting financial satisfaction among Dominican sample.
Note. NH = neighborhood.

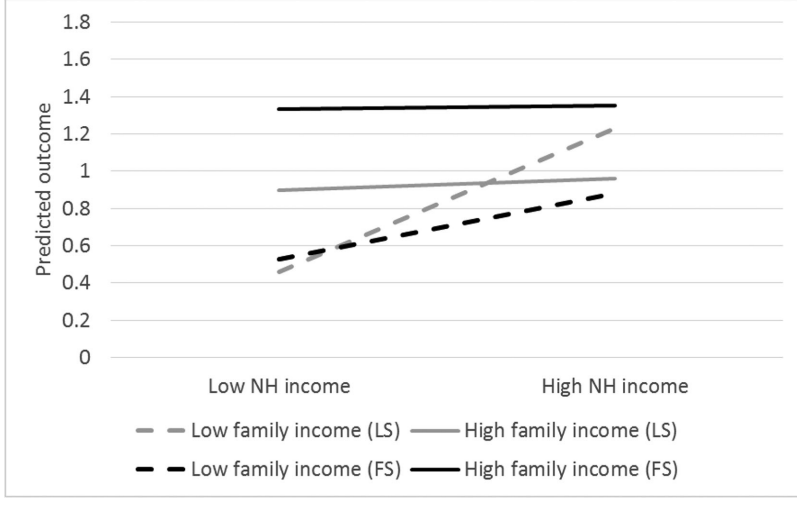

Figure 2. Interaction between family income and neighborhood income predicting life and financial satisfaction among Puerto Rican sample.
Note. LS = life satisfaction; FS = financial satisfaction; NH = neighborhood.

with higher status neighbors make negative social comparisons that contribute to psychological stress and, in this case, decreases in life and financial satisfaction. The differences in the patterns of results may be because of differences in neighborhood racial/ethnic makeup across samples (Table 1), affecting how individuals make social comparisons. Puerto Rican and Dominican respondents living in predominantly racial/ethnic minority neighborhoods may be more likely to see similarities with their neighbors and Mexican respondents living in more White neighborhoods may be more likely to see differences.

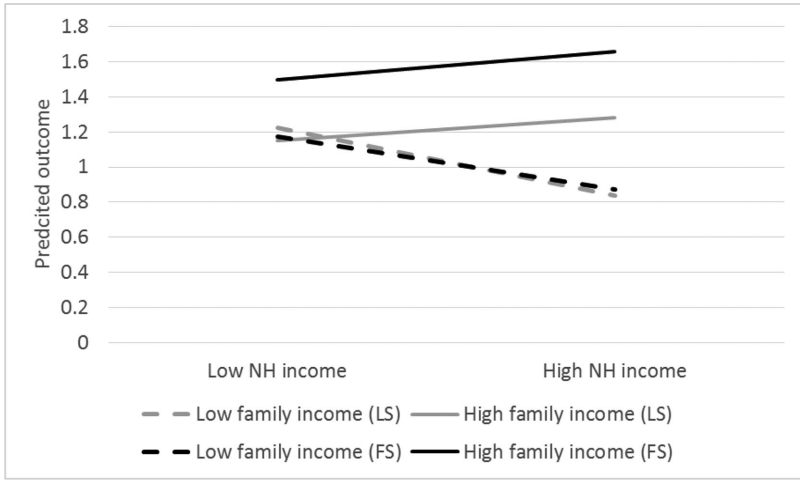

Figure 3. Interaction between family income and neighborhood income predicting life and financial satisfaction among Mexican sample.
Note. LS = life satisfaction; FS = financial satisfaction; NH = neighborhood.

Limitations

Some limitations of this study should be mentioned. First, like the majority of similar studies, this analysis is not causal. Although we adjusted models for theoretically relevant individual and neighborhood characteristics, we cannot eliminate the possibility that unmeasured factors are influencing choice of both neighborhood and mental health and well-being. Second, although well equipped to answer our research questions in other ways, the current data were limited by its cross-sectional design, heavy reliance on self-report measures, and failure to measure potential mediating processes such as neighborhood resources and social comparisons. Future research should explore additive and multiplicative associations between individual and neighborhood income over time and empirically examine theorized mediators of these relationships on adults' mental health and well-being.

Fourth, data on individual income was collected in 1995–1996, but 1990 census data were used to capture neighborhood income. However, in our sample of neighborhoods, median household income from the 1990 census was correlated at .56 with median household income from the 2000 census, indicating that the income level in these neighborhoods remained relatively stable over this 10-year period. Additionally, since this study was conducted in the mid-1990s, the results may not generalize to other time periods. However, the consistency of relationships between income and multiple measures of health increase our confidence that these findings continue to relevant today.

Finally, our measures of mental health were limited. Surprisingly, despite evidence demonstrating a relationship between family income and mental health, family income was not related to depressive symptoms in our analyses. However, an examination of the estimates revealed the relationship to be in the expected direction (higher income being related to fewer symptoms), despite the fact that they did not reach statistical significance. One explanation for this may be that the relationship between income and mental health may be better reflected using a less severe indictor of depression. While income might be related to a single symptom of depression, or a more general measure of well-being

(as found in the current analyses), it may be less strongly related to the accumulation of symptoms, which may be driven by a broader set of environmental and biological characteristics. As such, future research should continue to explore these relationships among Latino samples using a variety of measures of both mental health and well-being.

Conclusion

Despite these limitations there are several important conclusions to be drawn from these findings. First, they demonstrate the heterogeneity that exists across Latino first-generation immigrant groups, with the interaction between family and neighborhood income operating differently across groups. Second, few studies have examined indicators of well-being such as life and financial satisfaction among Latino samples. This work highlights the importance of examining these types of less severe outcomes, which may be more closely related to economic standing.

Finally, the interaction between family and neighborhood income was a consistent predictor of outcomes across groups. This suggests that among first-generation Latino immigrants, family income needs to be considered in the context of the economic makeup of the neighborhoods in which individuals are embedded. Indeed, recent work has found neighborhood economic indicators to be predictive of Latino immigrants' perceptions of one's social status relative to others in society, with residence in lower income neighborhoods being related to lower perceptions of social status (Reitzel et al., 2010). Therefore, neighborhoods may be a particularly salient context for immigrant adaptation, in terms of both resource availability and support and messages about one's position in the larger economic distribution.

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