HHS Public Access

Author manuscript

*J Epidemiol Community Health*. Author manuscript; available in PMC 2018 April 01.

Published in final edited form as:

*J Epidemiol Community Health*. 2017 April ; 71(4): 318–323. doi:10.1136/jech-2016-208034.

# Residential segregation and mental health among Latinos in a nationally representative survey

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## Abstract

**Background—**Among Latinos, living in a locality with greater Latino ethnic density may be protective for mental health, although findings vary by Latino subgroup, gender and birthplace. Although little studied, Latino residential segregation may capture different pathways linking risk and protective environmental factors to mental health than local ethnic density.

**Methods—**This study evaluated the association between residential segregation and mental distress as measured by the Kessler-10 (K10) among Latino participants in the National Latino and Asian American Study (NLAAS). Census data from 2000 was used to calculate metropolitan statistical area (MSA) residential segregation using the dissimilarity and isolation indices, as well as census tract ethnicity density and poverty. Latino subgroup (Puerto Rican, Mexican American, Cuban American and other Latino subgroup), gender and generation status were evaluated as moderators.

**Results—**Among 2554 Latino participants in NLAAS, residential segregation as measured by the isolation index was associated with less mental distress (β −0.14, 95% CI −0.26 to −0.03 log(K10)) among Latinos overall after adjustment for ethnic density, poverty and individual covariates. Residential segregation as measured by the dissimilarity index was significantly associated with less mental distress among men (β −0.56, 95% CI −1.04 to −0.08) but not among women (β −0.20, 95% CI −0.45 to 0.04, p-interaction=0.019). No modification was observed by Latino subgroup or generation.

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**Contributors** LM conceived of the hypothesis. CJN undertook the analysis with input from LM and YW. CJN drafted the manuscript with critical input from EMA, SEV, EDZ and DLS.

**Competing interests** None declared.

**Ethics approval** Partners Healthcare Institutional Review Board.

**Provenance and peer review** Not commissioned; externally peer reviewed.

**Data sharing statement** This study used data from the National Latino and Asian American Study (NLAAS). The majority of NLAAS data are open access and available through the Inter-university Consortium for Political and Social Research (ICPSR).

**Conclusions—**Among Latinos, increasing residential segregation was associated with less mental distress, and this association was moderated by gender. Findings suggest that MSA-level segregation measures may capture protective effects associated with living in Latino communities for mental health.

## INTRODUCTION

Past research has identified complex associations between environmental factors, individual factors and health among Latinos living in the USA.[1] Termed the 'Hispanic Paradox', many health outcomes among Latinos have been observed to be comparable to or better than those of non-Latino whites,[23] despite severe inequities in exposure to health risk factors experienced by Latinos as compared with non-Latino whites, including a higher risk of unemployment, lower household income and lower educational attainment.[3] Additionally, many health outcomes among Latinos have been observed to worsen with acculturation and with duration of residence in the USA.[4] These findings suggest that there may be protective factors associated with living in Latino cultural environments.[3] A key potential protective pathway for Latinos is living in ethnic enclaves. Living in ethnic enclaves is associated with experiencing increased social support, social cohesion, family support and buffering of interpersonal racism,[15] which in turn are associated with better health outcomes.[67] These potential pathways, however, may vary by many individual factors including country of birth, time in the USA and gender.[89]

### Ethnic density, residential segregation and health

Local ethnic density, the proportion of like-group community members within a given micro area and residential segregation, the differential patterning of local ethnic density within a larger geographic area, are important risk factors for physical and mental health.[10] Both local ethnic density and larger scale residential segregation may capture either the health impact of clustering of environmental inequities through institutional discrimination and/or protective pathways representing health benefits of local social environments. It has been theorised that local ethnic density may be better suited to assess protective pathways related to local social environments, and larger scale residential segregation may better serve as a proxy for institutional discrimination linked to policy systems. However, the utility of each measure for assessing harmful versus protective pathways, and their suitability for assessing outcome-specific pathways, has yet to be conclusively determined.[11] Among Latinos, this complexity can be observed in disparate findings for the association of both measures with physical health, including associations between higher ethnic density and lower mortality,[12] higher residential segregation and higher mortality among patients with breast cancer[13] and null findings for residential segregation and cardiovascular disease.[14]

### Prior research: ethnic density, residential segregation and mental health among Latinos

Findings for the associations between ethnic density, residential segregation and mental health among Latinos have been similarly conflicting. Two past studies in the National Latino and Asian American Survey (NLAAS) evaluated the association of ethnic density and mental health among Latinos. Hong *et al*[15] found that ethnic density was significantly associated with poorer self-rated mental health among Latinos, but that this association was

mediated by neighbourhood cohesion. Bécares[16] found an association between greater ethnic density and greater mental distress among first-generation Mexican Americans, and an association between greater ethnic density and lower mental distress among second-generation Cuban Americans and among Puerto Ricans overall. Additional studies have reported associations between higher Latino ethnic density and lower levels of depression overall[17,18] or among only men,[8,9] and a curvilinear association between Latino ethnic density and depression, with those living in areas of moderate ethnic density having the most depressive symptoms.[19] In the only study to evaluate the association between residential segregation and mental health among Latinos, Lee[20] evaluated residential segregation as measured by the isolation index among 400 Latinos in the Midlife Development in the US (MIDUS) study in Chicago. Lee found that residential segregation was associated with a greater number of depressive and anxiety symptoms among both Mexican Americans and Puerto Ricans, although the results were attenuated for Puerto Ricans after adjustment for individual-level covariates.[20] Given the likely complex relationship between ethnic density, residential segregation and mental health, it is possible that the effect of ethnicity density and residential segregation on mental health may differ between subgroups, among whom the role of factors such as social support, exposure to structural inequities and resiliency may vary. This may be reflected in the disparate findings between subgroups and between studies overall in previous research.

Given the conflicting findings for the association between ethnic density and mental health among Latinos, the limited past research evaluating the association of residential segregation and mental health among Latinos and the indication that the association between residential segregation and mental health may vary by several key moderators, additional research in this area is needed. To address this, we investigated the association between residential segregation at the metropolitan statistical area (MSA) level and mental distress among Latinos participating in a national survey. We additionally evaluated both tract-level ethnic density and poverty as potential mediators, and evaluated Latino ethnic subgroup, gender and generation status in the USA as potential effect modifiers.

## METHODS

This study is based in the NLAAS, a population-based survey designed to assess prevalence of psychiatric conditions, use of mental health services and factors contributing to mental health status among 2554 Latino and 2095 Asian American participants.[21] Only Latino participants were included in this analysis. NLAAS used a four-stage national probability sampling frame, consisting of nesting samples conducted in the following order: (1) US MSAs and counties, (2) area segments within each selected MSA or county, (3) housing units within each selected area segment and (4) eligible respondents in each selected housing unit. Surveys were conducted in a participant's home when possible using a computer-assisted personal interview format.[22] All participants in NLAAS provided informed consent after study procedures had been explained.[21] This secondary analysis was approved by the Partners Healthcare Institutional Review Board, and has conformed to the principles embodied in the Declaration of Helsinki.

## Mental distress

We investigated the association between residential segregation and general mental distress, as assessed by the Kessler 10 (K10). The K10 is a 10-item scale assessing non-specific psychological distress developed for use in the National Health Interview Survey (NHIS) to estimate the prevalence of serious mental illness.[23] Questions ask about frequency of past-month mental distress, with items including, for example, how often participants felt tired for no good reason, depressed and that everything was an effort. Questions were scored from 1 (all of the time) to 5 (none of the time). Items were reverse-coded (higher values representing more distress) and summed to range from 10 to 50. The K10 has moderate validity against the 12-month Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV disorders other than substance use disorder with a receiver operating characteristic curve of 0.85.[24]

## Residential segregation

Residential segregation was assessed for MSAs, using data from the 2000 US Census. For 97 participants who did not reside within an MSA, residential segregation measures were calculated at the county level. We used two common indices for residential segregation: the dissimilarity index and the isolation index.[25] The dissimilarity index represents the proportion of Latinos within an MSA who would have to move to a new census tract in order for all census tracts to have an equal proportion of Latinos, with a higher dissimilarity index indicating greater residential segregation. The formula for the dissimilarity index is:

$$Dissimilarity\ Index = \sum_{i=1}^{n} \frac{t_i\,|(p_i - P)|}{2TP(1-P)}$$

where i represents census tracts 1 though n in a given MSA, p represents proportion of Latinos within census tract i, P the proportion of Latinos within an MSA, t the total population of census tract i and T the total population of an MSA.

The isolation index represents the odds that an individual who is Latino would have the next person they encounter also be Latino, with a higher isolation index indicating greater residential segregation. The formula for the isolation index is:

$$Isolation\ index = \sum_{i=1}^{n} \left( \frac{\chi_i}{X} \times \frac{\chi_i}{t_i} \right)$$

where $\chi$ represents the total number of Latinos within census tract i and X the total number of Latinos within an MSA. While the dissimilarity index is commonly used as a measure of residential segregation, the isolation index may be more strongly associated with adverse health outcomes.[1126] However, unlike the dissimilarity index, an individual's isolation index is dependent on the overall ethnic density of the MSA in which they reside (a higher ethnic density corresponding to a higher isolation index), and may therefore serve as a better proxy for the potential beneficial effects of high ethnic density on health among some Latino subgroups.

### Ethnic density and poverty

Ethnic density was calculated for census tracts, using data from the 2000 US Census. We calculated ethnic density as the ratio of the total number of Latinos living in a census tract to the total population of the census tract. Poverty was calculated using data from the 2000 US Census as the proportion of individuals living in a census tract with an income below 100% of the federal poverty limit.

### Effect modifiers and other covariates

Per past research indicating heterogeneity in the association of ethnic density and residential segregation with mental health among Latinos,[8914] we evaluated the association between residential segregation and mental distress stratified by Latino subgroup (Puerto Rican, Mexican American, Cuban American and other Latino), gender and generation (first, second and third or greater generation). We adjusted all models for gender, age (18 to <35, 35 to <65, ≥65 years), marital status (single, partnered, widowed/divorced/separated), education (<high school, ≥high school) and poverty (household <100% poverty level, ≥100% poverty level).

### Analysis

Descriptive statistics were summarised as non-weighted frequencies and weighted per cents or as weighted means and SEs. Distributional differences of demographic factors by Latino ethnic group were computed using the Rao-Scott $\chi^2$ test. Data were missing in the NLAAS for generation status (n=10) and for items summed for the K10 score (range n=7–17). Missing data were imputed to include all participants in analysis. A multilevel random-effects model controlled for clustering at the MSA level (level 2) and census tract level (level 1) using the GLLAMM package.[27] To account for the complex sampling design of NLAAS in the multilevel regression models, survey weights were scaled to sum to the total population of the MSA.[2829] Score on the K10 was log-transformed and centred at its mean to facilitate model convergence. All models were adjusted for age, sex, marital status, education and poverty. To account for the potential of tract-level ethnic density and poverty to mediate pathways between residential segregation and mental distress, we ran four separate models: (1) residential segregation alone, (2) residential segregation adjusted for ethnic density, (3) residential segregation adjusted for poverty and (4) residential segregation adjusted for ethnic density and poverty. Subgroup analyses were conducted for Latino ethnicity, gender and generation status in the USA by including interaction terms in regression models. All analyses were conducted in STATAV.13 (StataCorp. Stata Statistical Software: Release 13. 2013).

## RESULTS

In total, 2554 Latinos participated in NLAAS and were included in this analysis. This included 495 Puerto Ricans, 868 Mexican Americans, 577 Cuban Americans and 614 Latinos of another group (table 1). The majority of participants reported first-generation status (63.9%), with 22.0% reporting second-generation status and 14.1% third-generation or later generation status. The majority of participants were young (49.0% <35 years old) and 51.5% were female. Most were partnered (51.7%) and had a high school education or

less (68.6%), and 27.1% lived in a household below the federal poverty level. Mean score on the K10 was 13.7 (SEM 0.2, range 10–50). Participants resided in 41 MSAs and 316 census tracts, with an average of 7.7 (SD 12.7, range 1–60) census tracts within each MSA. Mean number of participants per census tract was 8.1 (SD 10.3, range 1–90), and mean number of participants per MSA was 62.3 (SD 119.3, range 1–570).

### Residential segregation and mental distress

There was no significant association between the dissimilarity index and score on the K10 among Latinos overall (table 2). The isolation index was associated with a significantly lower score on the K10 (β −0.13, 95% CI −0.22 to −0.03) after adjustment for age, sex, marital status, education and poverty. The association between the isolation index and lower score on the K10 persisted after adjustment for ethnic density and poverty. In models for the dissimilarity index and the isolation index, tract-level poverty was significantly associated with a higher score on the K10 (β 0.33, 95% CI 0.14 to 0.52 for the model adjusting for isolation index). Ethnic density was not associated with the K10 in either model.

### Moderation by Latino ethnicity

There was no significant moderation of the association between either the dissimilarity index or the isolation index and the K10 by Latino ethnicity (table 3). However, within strata of Latino subgroups, the isolation index was only associated with a lower score on the K10 for the other Latino ethnicity group.

### Moderation by gender

There was a significant moderation of the association between the dissimilarity index and score on the K10 by gender (p=0.019). Among men, the dissimilarity index was associated with a lower score on the K10 (β −0.58, 95% CI −1.06 to −0.10), while this association did not reach significance among women (β −0.23, 95% CI −0.47 to 0.02). This significant modification of the association between the dissimilarity index and score on the K10 remained after adjustment for ethnic density and poverty.

### Moderation by generation status

We found no significant modification of the association between either the dissimilarity index or the isolation index and score on the K10 by generation status in the USA. However, it appeared that both indices were associated with lower scores on the K10 only among those with first-generation and second-generation status.

## DISCUSSION

This study evaluated the association between residential segregation at the MSA level and mental distress among Latinos in the NLAAS nationally representative survey. Greater residential segregation as measured by the isolation index was associated with less mental distress among Latinos overall. The association between residential segregation as measured by the dissimilarity index and mental distress was significantly moderated by gender, with men living in MSAs of greater residential segregation having less mental distress. These associations remained after adjusting for tract-level ethnic density and poverty. No

significant modification of the association between residential segregation and mental distress was observed by Latino ethnic subgroup or generation in the USA.

### Comparison to prior research: ethnic density and mental health among Latinos

Two previous studies investigating tract-level ethnic density and mental health in the NLAAS cohort have found an association between higher ethnic density and poorer mental health,[15] as well as an association between higher ethnic density and more mental distress among first-generation Mexicans and less mental distress among second-generation Cuban Americans and among Puerto Ricans overall.[16] Our study extends these past findings, demonstrating that not only was residential segregation associated with lower mental distress among Latinos overall, but that tract-level ethnic density was not associated with mental distress in models including MSA-level residential segregation.

### Comparison to prior research: residential segregation and mental health among Latinos

In the only previous study to investigate residential segregation and mental health among Latinos, Lee[20] found an association between a higher isolation index and more depressive and anxiety symptoms among Mexican Americans. While we did not find a significant modification of the association between residential segregation and mental distress by Latino ethnicity, within strata of Latino ethnicity it appeared that the association between higher isolation index and lower mental distress may have been driven by the other Latino subgroup. Interpretation of this finding is limited, however, due to the heterogeneity of the 'other Latino' group. Additionally, past research has found an association between higher ethnic density and more depression symptoms only among US-born Latinos.[30] Although we found no significant moderation of the association between residential segregation and mental distress by generation, there was the suggestion that the protective association between residential segregation and mental distress may be limited to first-generation and second-generation Latinos. These findings suggest that additional research evaluating the potential for differential effects of residential segregation on mental distress by ethnic subgroup and generation is needed.

### Comparison to prior research: moderation by gender

Similar to two past studies finding a significant association between higher Latino ethnic density and lower levels of depression only among men,[89] we found a significant modification of residential segregation as measured by the dissimilarity index and mental distress by gender, with a significant protective association between the dissimilarity index and mental distress among men but not among women. Although the pathways linking residential segregation to mental distress are complex, past research has suggested that men may experience an increased benefit of social support on mental health.[31]

### Ethnic density versus residential segregation and mental health among Latinos

Notably, we observed no association between tract-level ethnic density and mental distress in models adjusting for MSA-level residential segregation, although the association between higher tract-level poverty and greater mental distress remained robust in all models. This suggests that measures of residential segregation at the MSA level may capture the potential

benefits of living in Latino ethnic enclaves on mental distress more completely than tract-level ethnic density. Whether other demarcations beyond both the tract and MSA levels may perform better is an important point for future research. It is also important to note that neither the isolation index nor the dissimilarity index in this study had utility in assessing the harmful effects of clustering of environmental inequities by Latino ethnicity, and indeed neither measure was meaningfully altered by adjusting for tract-level poverty. Therefore, more research is needed to identify the best measures for capturing these important pathways.

Our findings should be interpreted in the light of several limitations. First, our use of a measure of general mental distress may not most accurately represent the potential range of psychological effects of residential segregation. Other studies have used measures of depression and anxiety, and therefore our findings may not be directly comparable. Second, we only indirectly assessed the potential pathways through which residential segregation may affect mental distress by adjusting for tract-level ethnic density and poverty. As the associations between these factors are likely complex, adjusting for these potential pathways may only inadequately evaluate potential mediation. Third, although we found no significant moderation of the association between residential segregation and mental distress by Latino ethnic group or generation status in the USA, due our relatively small sample size with which to assess these modifiers this lack of statistical moderation should be interpreted with caution. Finally, data were collected from 2001 to 2003, and it is possible that changes in residential segregation and underlying factors affecting mental health over time may affect the generalisability of findings to the present. These results extend past findings by suggesting that measures of residential segregation may capture protective pathways linking residence in Latino communities to lower mental distress. Additionally, the null associations between ethnic density and mental distress after adjusting for MSA-level segregation measures suggest that the ideal unit for assessing protective pathways may be at a scale larger than the census tract. Finally, this study further supports the potential protective effects of living in Latino communities, which may have important policy implications if future research can isolate the community-level factors that most contribute to lower mental distress. Additional research is needed to identify the adequacy and utility of measures assessing residential segregation, ethnic density and health outcomes, and to better isolate potential areas for policy development and community intervention.

## Acknowledgments

The authors wish to thank Dr Margarita Alegria, Sheri Lapatin Markle and the Disparities Research Unit for facilitating access to the National Latino and Asian American Study.

**Funding** Time for this manuscript was funded in part by a grant from the National Institute of Mental Health (NIMH K23 MH096029-01A1) awarded to LM.

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**What is already known on this subject**

► Residential segregation has been used as a proxy for exposure to clustering of social and physical environmental inequities by race/ethnicity, although findings linking residential segregation to health among Latinos have been conflicting. Disparate findings may be due to residential segregation also serving as a proxy for exposure to local cultural environments, which may be protective for health.

**What this study adds**

► Among Latinos, greater residential segregation was associated with lower mental distress. Residential segregation may serve as a proxy for exposure to the protective effects of local cultural environments on mental health, and the potential for residential segregation to underestimate the health effects of exposure to racial/ethnic inequities among Latinos should be assessed in future research.

**Table 1**

Characteristics of Latino participants in the National Latino and Asian American Study (NLAAS)

| | All Latinos (n=2554) | | Puerto Rican (n=495) | | Mexican American (n=868) | | Cuban American (n=577) | | Other Latino (n=614) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | n | Percent | n | Percent | n | Percent | n | Percent | n | Percent | p Value |
| Age category | | | | | | | | | | | |
| 18–34 | 1068 | 49.0 | 190 | 49 | 458 | 49 | 135 | 49 | 285 | 49 | 1 |
| 35–49 | 801 | 30.1 | 165 | 30.1 | 266 | 30.1 | 166 | 30.1 | 204 | 30.1 | |
| 50–64 | 454 | 13.4 | 99 | 13.4 | 102 | 13.4 | 160 | 13.4 | 93 | 13.4 | |
| 65+ | 231 | 7.6 | 41 | 7.6 | 42 | 7.6 | 116 | 7.6 | 32 | 7.6 | |
| Sex | | | | | | | | | | | |
| Male | 1127 | 51.5 | 213 | 51.5 | 398 | 51.5 | 276 | 51.5 | 240 | 51.5 | 1 |
| Female | 1427 | 48.5 | 282 | 48.5 | 470 | 48.5 | 301 | 48.5 | 374 | 48.5 | |
| Generation | | | | | | | | | | | |
| First | 1629 | 57.3 | 217 | 41.7 | 487 | 56.4 | 501 | 76.4 | 424 | 61.4 | <0.001 |
| Second | 561 | 28.1 | 159 | 33.5 | 262 | 29.4 | 14 | 5.0 | 126 | 27.4 | |
| Third or greater | 359 | 14.6 | 115 | 24.8 | 118 | 14.2 | 62 | 18.6 | 64 | 11.2 | |
| Marital status | | | | | | | | | | | |
| Married | 1289 | 51.7 | 195 | 37.4 | 505 | 57.5 | 310 | 52.8 | 279 | 45.1 | <0.001 |
| Never married | 669 | 30.0 | 162 | 38.4 | 228 | 26.9 | 90 | 27.0 | 189 | 33.5 | |
| Widowed/separated/divorced | 596 | 18.3 | 138 | 24.2 | 135 | 15.5 | 177 | 20.2 | 146 | 21.4 | |
| Education (years) | | | | | | | | | | | |
| <12 | 993 | 44.1 | 172 | 32.6 | 441 | 53.1 | 177 | 21.0 | 203 | 34.1 | <0.001 |
| 12 | 633 | 24.5 | 140 | 30.1 | 215 | 23.7 | 136 | 27.2 | 142 | 23.6 | |
| 13–16 | 758 | 26.7 | 160 | 33.0 | 183 | 19.8 | 190 | 38.9 | 225 | 36.2 | |
| 17+ | 170 | 4.7 | 23 | 4.3 | 29 | 3.4 | 74 | 12.9 | 44 | 6.2 | |
| Poverty | | | | | | | | | | | |
| Yes | 633 | 27.1 | 111 | 21.6 | 261 | 31.9 | 132 | 20.9 | 129 | 27.1 | <0.001 |
| No | 1921 | 73.0 | 384 | 78.4 | 607 | 68.1 | 445 | 81.8 | 485 | 79.1 | |
| Kessler 10 (mean, SEM) | 13.7 | 0.2 | 15.1 | 0.4 | 13.4 | 0.3 | 13.6 | 0.3 | 13.9 | 0.4 | 0.007 |

*J Epidemiol Community Health*. Author manuscript; available in PMC 2018 April 01.

**Table 2**

Association of residential segregation with the Kessler 10 (log-transformed)[*,†]

| | Model 1: residential segregation | | Model 2: residential segregation and ethnic density | | Model 3: residential segregation and poverty | | Model 4: residential segregation, ethnic density and poverty | |
|---|---|---|---|---|---|---|---|---|
| | β (95% CI) | p Value | β (95% CI) | p Value | β (95% CI) | p Value | β (95% CI) | p Value |
| Dissimilarity index | −0.08 (−0.28 to 0.12) | 0.45 | −0.07 (−0.29 to 0.14) | 0.50 | −0.11 (−0.32 to 0.10) | 0.30 | −0.06 (−0.26 to 0.15) | 0.59 |
| Ethnic density | | | −0.01 (−0.06 to 0.05) | 0.83 | | | −0.07 (−0.15 to 0.01) | 0.11 |
| Poverty | | | | | 0.33 (0.14 to 0.52) | 0.001 | 0.38 (0.15 to 0.62) | 0.001 |
| Isolation index | −0.13 (−0.22 to −0.03) | 0.007 | −0.18 (−0.30 to −0.07) | 0.002 | −0.15 (−0.24 to −0.06) | 0.001 | −0.14 (−0.26 to −0.03) | 0.012 |
| Ethnic density | | | 0.06 (0.01 to 0.11) | 0.014 | | | −0.01 (−0.10 to 0.08) | 0.84 |
| Poverty | | | | | 0.35 (0.15 to 0.54) | <0.001 | 0.36 (0.12 to 0.59) | 0.003 |

[*] All models adjusted for age (18–34, 35–49, 50–64, 65+ years), sex, marital status (married, never married, widowed/separated/divorced), education (<12, 12, 13–16, 17+ years) and household poverty (<100% poverty limit, ≥100% poverty limit).

[†] Multilevel random-effects models included random effects for metropolitan statistical areas and census tracts.

**Table 3**

Association of residential segregation with the Kessler 10 (log-transformed)[*,†] stratified by Latino ethnic subgroup, gender and generation in the USA

| | Model 1: residential segregation | | Model 4: residential segregation, ethnic density and poverty | | |
|---|---|---|---|---|---|
| | β (95% CI) | p Value | β (95% CI) | p Value | p for interaction |
| *By Latino ethnic subgroup* | | | | | |
| Dissimilarity index | | | | | |
| Puerto Rican | 0.46 (−0.16 to 1.07) | 0.15 | 0.40 (−0.22 to 1.02) | 0.20 | 0.32 |
| Mexican American | −0.16 (−0.68 to 0.37) | 0.56 | −0.13 (−0.67 to 0.41) | 0.64 | |
| Cuban American | 0.31 (−0.62 to 1.23) | 0.52 | 0.31 (−0.60 to 1.21) | 0.51 | |
| Other Latino ethnicity | −0.42 (−0.95 to 0.10) | 0.11 | −0.44 (−0.97 to 0.09) | 0.10 | |
| Isolation index | | | | | |
| Puerto Rican | 0.01 (−0.50 to 0.52) | 0.96 | −0.02 (−0.52 to 0.49) | 0.95 | 0.33 |
| Mexican American | −0.01 (−0.23 to 0.20) | 0.92 | −0.06 (−0.29 to 0.18) | 0.64 | |
| Cuban American | 0.15 (−0.25 to 0.55) | 0.46 | 0.11 (−0.30 to 0.53) | 0.59 | |
| Other Latino ethnicity | −0.32 (−0.65 to 0.01) | 0.055 | −0.36 (−0.68 to −0.04) | 0.028 | |
| *By gender* | | | | | |
| Dissimilarity index | | | | | |
| Women | −0.23 (−0.47 to 0.02) | 0.068 | −0.20 (−0.45 to 0.04) | 0.099 | 0.019 |
| Men | −0.58 (−1.06 to −0.10) | 0.017 | −0.56 (−1.04 to −0.08) | 0.022 | |
| Isolation index | | | | | |
| Women | −0.19 (−0.31 to −0.06) | 0.003 | −0.21 −0.35 to (−0.06) | 0.007 | 0.098 |
| Men | −0.32 (−0.58 to −0.06) | 0.017 | −0.34 (−0.62 to −0.06) | 0.018 | |
| *By generation* | | | | | |
| Dissimilarity index | | | | | |
| First generation | −0.08 (−0.49 to 0.32) | 0.68 | −0.07 (−0.50 to 0.36) | 0.76 | 0.41 |
| Second generation | −0.38 (−0.92 to 0.15) | 0.16 | −0.35 (−0.89 to 0.19) | 0.20 | |
| Third generation | 0.19 (−0.27 to 0.65) | 0.42 | 0.21 (−0.22 to 0.65) | 0.34 | |
| Isolation index | | | | | |
| First generation | −0.17 (−0.33 to −0.001) | 0.048 | −0.19 (−0.36 to −0.03) | 0.02 | 0.47 |
| Second generation | −0.22 (−0.47 to 0.03) | 0.087 | −0.24 (−0.50 to 0.03) | 0.082 | |
| Third generation | 0.02 (−0.20 to 0.24) | 0.86 | −0.01 (−0.23 to 0.22) | 0.96 | |

*J Epidemiol Community Health*. Author manuscript; available in PMC 2018 April 01.

[*] All models adjusted for age (18–34, 35–49, 50–64, 65+ years), sex, marital status (married, never married, widowed/separated/divorced), education (<12, 12, 13–16, 17+ years) and household poverty (<100% poverty limit, ≥100% poverty limit).

[†] Multilevel random-effects models included random effects for metropolitan statistical areas and census tracts.