

Article

# Assessing the Role of Family Structure in Racial/Ethnic Residential Isolation

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**Abstract:** Fifty years after the passage of the Fair Housing Act, racial/ethnic residential segregation and discrimination persist in the housing market. In 2018, the National Fair Housing Alliance reported that the third and fifth largest discrimination complaints are made on the bases of familial status and sex, respectively. However, housing research has largely ignored how family structure may shape patterns of racial/ethnic residential segregation. By assessing residential isolation, our analyses add to the small body of literature exploring racial/ethnic segregation by family structure using data from the 1990–2010 decennial censuses and the 2006–2010 American Community Survey (ACS) drawn from the Neighborhood Change Database (NCDB) and the National Historical Geographic Information System (NHGIS). Our results reveal that white, married-couple families experience the greatest levels of residential isolation, net of controls for relevant socioeconomic and demographic factors. In addition, our within racial/ethnic group analyses indicate that black, female-headed families experience significantly more isolation than their married-couple counterparts, while the reverse is true for Hispanic and white families. Our results provide support for the tenets of the place stratification model and suggest researchers should consider family structure when assessing racial/ethnic residential segregation as race/ethnicity and family structure interact to shape housing outcomes in metropolitan America.

**Keywords:** residential segregation; family structure; race/ethnicity; isolation index; housing; social inequality; racial segregation

## 1. Introduction

In the fifty years since the passage of the Fair Housing Act (FHA), that prohibited housing discrimination on the basis of race, color, national origin, family status (e.g., pregnancy or the presence of children), sex, disability, and religion, discrimination has continued to persist. In a 2018 report from the National Fair Housing Alliance (NFHA) the second most reported type of discrimination complaint filed with federal, state, and local fair housing agencies and private fair housing groups is discrimination by race (18.5%), the third most common is by familial status (9.3%), and the fifth most common is by sex (6.7%)<sup>1</sup>. While marital status is not a federally protected class, some cities and states include it in their fair housing protections. These protected classes are classified as ‘other’ complaints in the totals by NFHA. In the 2018 report, 8.3% of all complaints are classified in this ‘other’ category, and of this 8.3%, 3.3% are complaints on the basis of marital status (Abedin et al. 2018).

<sup>1</sup> Discrimination on the basis of disability is the most common (56.7%) as it is the easiest to detect and usually involves a denial of a request for an accommodation or modification.

There is well-documented evidence of housing discrimination by race/ethnicity (see [Pager and Shepherd 2008](#) for a review of this literature). This evidence primarily comes from experimental housing audit studies using paired tests (e.g., [Turner et al. 2013](#)). Telephone housing discrimination audit studies have also suggested that black women face greater discrimination in the rental housing market ([Massey and Lundy 2001](#)). [Roscigno et al. \(2009\)](#) find that discrimination can occur even after the housing search and rental agreement is put into place, and that black women are most likely to face discrimination. Using claims from the Ohio Civil Rights Commission, they provide evidence of discrimination ranging from failure to provide adequate maintenance, to unequal enforcement of rules, to even harassment and threats of physical violence. In a recent case study of the housing market in Houston, [Korver-Glenn \(2018\)](#) suggests racial/ethnic stereotypes and discrimination are not only present in each stage of the housing market, but are compounded across these stages creating durable inequality by race/ethnicity in the housing search process.

Surprisingly, very little scholarly research has focused on how residential segregation is shaped by race/ethnicity and family structure in contemporary metropolitan America, which would be in part attributable to the housing discrimination prohibited by the FHA and under state and local policies ([Iceland et al. 2010](#); [Marsh and Iceland 2010](#)). [Iceland et al. \(2010\)](#) find white families with children are more segregated from black, Hispanic, and Asian households than white households are in general. They also find white, nonpoor, married-couple households tend to have somewhat limited interaction with other groups, especially black and Hispanic families. [Marsh and Iceland \(2010\)](#) examine segregation between single and living alone (SALA) and married-couple households and find black SALA households are less segregated from white SALA households than they are from white married-couple households, but they also find black SALA segregation from white married-couple and female-headed families is high in absolute terms, and in relation to their segregation from black married-couple households.

While both studies clearly show that family structure contributes to shaping racial/ethnic residential segregation, they are limited in several important ways. [Marsh and Iceland \(2010\)](#) only consider the segregation of black and white married-couple families and SALA households, who are classified as nonfamily households in the census. Due to their focus on poor/nonpoor households, [Iceland et al. \(2010\)](#) have a limited set of metropolitan areas in their analyses, they do not examine minority segregation from all whites by family structure, and they do not disaggregate the single-parent household category by parental sex to examine female and male-headed families. Further, both of these existing studies use cross-sectional data from the 2000 census and do not examine residential isolation nor do they examine the patterns of segregation over time. Additionally, these studies have not examined what factors are associated with variation in segregation by family structure.

Our study seeks to build on this very limited set of literature on the residential segregation of racial/ethnic groups by family type. We use decennial census data from 1990 to 2010 from the Neighborhood Change Database (NCDB) to examine metropolitan residential segregation (defined as residential isolation) for white, black, and Hispanic married-couple and female-headed family households in 1990, 2000, and 2010. Here, we specifically focus on segregation as measured by the isolation index to examine how much contact each family subgroup has with other families of the same race/ethnicity and family type (we use the terms isolation and segregation interchangeably throughout this paper). Additionally, our study seeks to move beyond previous research by examining whether variation in racial/ethnic segregation by family type remains after controlling for group-specific and metropolitan level characteristics in multivariate analyses. This is particularly important because the isolation index is sensitive to the relative size of the groups being studied. Control variables are drawn from the NCDB and the National Historical Geographic Information System (NHGIS), in 1990 and 2000 data come from the Census and in 2010 from the 2006-2010 American Community Survey (ACS).

Our analyses ask three research questions: (1) Does residential isolation vary by race/ethnicity and family structure? (2) Among racial/ethnic groups, are female-headed families more isolated than

their married-couple counterparts? Finally, (3) how do sociodemographic characteristics relate to racial/ethnic residential isolation?

We focus our analyses on married-couple and female-headed families as defined by the Census Bureau, which include families with and without children. Due to the way that the Census Bureau tabulates the information in the summary files, our analyses do not disaggregate by the presence of children. The available data make a distinction on the basis of the age of the children (e.g., families with own children under 18 years of age and families with no own children under 18 years of age). Thus, such tabulations make it difficult to ascertain the impact of the presence of children on segregation because those with kids under 18 are being compared, potentially, to those with children over 18. Family researchers have established that married-couple families have better well-being outcomes with regard to socioeconomic status, educational attainment, and health (see [McLanahan and Percheski 2008](#) for a review of this literature; [Wen 2008](#)). In this way, racial/ethnic residential segregation can be thought of as a form of well-being for families where married-couple families, regardless of presence of children, may have better outcomes than female-headed families. Our study seeks to explicitly examine the residential patterns of these groups.

## 2. Theory

Like most studies of racial/ethnic residential segregation, we use the theories of spatial assimilation and place stratification, reviewed below. Despite several decades of research into racial/ethnic residential segregation, there is still much about the underlying causes of this segregation that remains unknown. [Krysan and Crowder \(2017\)](#) call for moving beyond the typical approach to segregation and consider both individual and structural elements and emphasize interaction between the two. We agree that research should move beyond the typical approach to studies of racial/ethnic segregation and suggest that more intra-group demographic differences such as family structure should be considered. Existing studies that examine racial/ethnic segregation have focused on the overall segregation of these groups, and segregation that is disaggregated by nativity status and income groups (e.g., [Bischoff and Reardon 2014](#); [Hall 2013](#); [Park and Iceland 2011](#); [Lichter et al. 2015](#); [Massey and Denton 1993](#); [Reardon and Bischoff 2011](#)). The theories of spatial assimilation and place stratification have not been used to examine intra-family group differences in segregation to date. We argue that including family structure in analyses of racial/ethnic residential segregation can help to explain this segregation. By ignoring the demographic lens of family structure, existing studies have not fully accounted for the discrimination families may face in the housing market, which shapes their segregation outcomes.

### 2.1. Spatial Assimilation

The spatial assimilation model maintains the residential distribution of households is influenced by household socioeconomic status, acculturation, and demographic factors ([Alba and Logan 1991, 1993](#); [Charles 2003](#); [Massey 1985](#)). Differences in socioeconomic status (SES) and for immigrants, acculturation, shapes patterns of segregation. Thus, families with more human capital and better financial resources may be able to access better quality neighborhoods than those with fewer resources ([Cort 2011](#); [Frank and Akresh 2016](#); [Friedman and Rosenbaum 2007](#); [Rosenbaum and Friedman 2007](#); [South et al. 2008](#)). Additionally, there are well-documented socioeconomic disparities between blacks and whites, and minority families may not be able to afford to live in the same neighborhoods as white families ([Clark 1986](#); [Crowder et al. 2006](#); [Oliver and Shapiro 1995](#); [South and Crowder 1997](#)). Studies have shown that these group differences in SES contribute to segregation between whites and racial/ethnic minorities ([Alba et al. 2014](#); [Firebaugh and Farrell 2016](#); [Hall and Greenman 2013](#); [Logan et al. 1996](#); [Rosenbaum and Friedman 2007](#); [Pais et al. 2012](#); [South et al. 2008](#); [Woldoff and Ovadia 2009](#)).

With regard to household types, recent census estimates demonstrate that female-headed households are by far the most disadvantaged, with a poverty rate that is nearly six times as high

as the rate for married-couple households (5.8% for married-couple vs. 29.9% for female-headed) (DeNavas-Walt et al. 2014). These results are even more dramatic when race/ethnicity is considered. In 2013, black female-headed households had a poverty rate of 46% and Hispanic female-headed households had a poverty rate of 47% while white married women had a poverty rate of only 5% (Entmacher et al. 2014). The spatial assimilation perspective argues, when these factors are accounted for, racial/ethnic and family structure disparities in residential segregation should disappear.

Studies examining income segregation find that affluent families, and particularly white affluent families are highly segregated from lower-income nonwhite families. The story of segregation by income is a story of segregation of affluence rather than segregation of poverty (Bischoff and Reardon 2014; Reardon and Bischoff 2011; Reardon et al. 2015). Sharp and Iceland (2013) find that whites, on the whole, are less segregated from black and Hispanic households with higher SES and that among whites, those with higher SES are more segregated from black and Hispanic households on the whole, offering further evidence of segregation of white affluence.

The spatial assimilation model also presents acculturation as a contributing factor in segregation. Relative to their native-born counterparts, foreign-born minority families are more segregated from native-born whites (Iceland and Scopilliti 2008). This is often attributed to a desire by recent immigrants to live in ethnic enclaves, lower levels of English proficiency, less experience navigating the U.S. housing market, and lower levels of income and educational attainment (Logan et al. 2002; Zhou 1992). Some studies of residential preferences have also indicated support for in-group preferences among Hispanic/Latinos and Asians, though these studies do not disaggregate by nativity status (Bader and Krysan 2015; Clark 2009).

## 2.2. Place Stratification

In contrast to spatial assimilation, the place stratification model acknowledges that a hierarchy of place exists and those at the top use a series of mechanisms of discrimination by individuals and institutions to maintain the status quo and their position (Alba and Logan 1991, 1993; Logan and Alba 1993; Logan and Molotch 1987). This model maintains that residential opportunities are constrained for racial/ethnic minorities or characteristics that distinguish groups as minorities by the actions of powerful groups and structural factors. Majority groups maintain social and physical distance from minority groups through various forms of discriminatory actions that prevent minorities from residing in the same locations, thereby increasing residential segregation between whites and minorities (Logan and Molotch 1987; Massey and Denton 1993; Turner et al. 2013; Yinger 1995).

There is a growing body of evidence that suggests family structure may impact treatment in the housing market. Massey and Lundy (2001) find black women were the most likely to encounter unfair treatment from housing authorities in a telephone audit study in Philadelphia. These women were least likely to contact and to speak with a rental agent, and even when they did, they were the least likely to be told the unit is available. They were also most likely to be told a credit check and application fee are required. Similarly, in Milwaukee, landlords are least likely to rent to single, black women with children. In order to obtain housing, these mothers often lie about the number of children they have, which landlords use as a pretext for eviction if these mothers are caught in their lie. Eviction disproportionately impacts black mothers, nearly half of all evictions in Milwaukee take place in black neighborhoods and women are nearly twice as likely as men to be evicted. After an eviction, women experience long periods of poverty, downward movement into substandard housing, and homelessness, all of which undermines their efforts to escape neighborhoods plagued by segregation and disadvantage (Desmond 2012, 2016; Desmond et al. 2013).

## 3. Hypotheses

Here we summarize our expectations under the spatial assimilation and place stratification models discussed above. First, descriptively, we expect that due to their greater socioeconomic disadvantage, black families and female-headed families, in particular, will be more isolated than

white and married-couple families. However, once controls are applied in the multivariate models, the spatial assimilation model maintains that these disparities will be mostly or fully attenuated. In contrast, the place stratification perspective expects that these disparities in isolation will remain and not change much in magnitude even after the addition of controls. Finally, the place stratification perspective expects white married-couple families to be highly segregated from other families through their use of discriminatory mechanisms that allow them to maintain their privileged status in the housing market. We do not expect the differences in the isolation of white married couples from other racial/ethnic family subtypes to be attenuated much, if at all, after including control variables.

## 4. Data and Methods

### 4.1. Data

Our analyses use 1990, 2000, and 2010 decennial census data and data from the 2006–2010 ACS from both the NCDB and the NHGIS. Consistent with previous segregation studies we use census tracts as the building blocks of our segregation analyses by using tract populations to calculate isolation scores for each metropolitan area (e.g., [Iceland et al. 2002](#); [Massey and Denton 1993](#)). As the NCDB data are from the tract-level (1990 and 2000 data are in 2010 boundaries), they are used to calculate the isolation scores for each metropolitan area. Metropolitan-level isolation scores serve as the dependent variable. Our control variables are at the metropolitan-level, but these data (and some variables of interest) are not available in the NCDB. Therefore, to construct our metropolitan-level control variables, we use data from the NHGIS. Beginning in 2005 the ACS replaced the long form of the decennial census. The ACS provides yearly data (as well as three and five-year averages) on demographic, economic, and housing variables formerly assessed in the census long form ([Mather et al. 2005](#)). Thus, all control variables used for the 2010 analyses come from the 2006–2010 ACS five-year estimates and are extracted from the NCDB and the NHGIS (except for the dummy variables indicating the region, which do not change across time). We discuss these datasets and variables in more depth below.

#### 4.1.1. Neighborhood Change Database

These analyses use 1990, 2000, and 2010 decennial census data as well as data from the 2006–2010 ACS five-year estimates obtained from the NCDB, which is maintained by the Urban Institute in conjunction with [GeoLytics, Inc. \(2010\)](#). It is important to define who is included in these analyses. As this project is focused on understanding the role of family structure in residential segregation, we only include non-Hispanic white, non-Hispanic black, and Hispanic families in our analyses<sup>2</sup>. These analyses examine two family types, married-couple and female-headed families<sup>3</sup>. Due to the difficulty of identifying other family households in earlier years of the census, we do not include such families as cohabiting-couple and extended-family households. The NCDB contains data from each decennial census on married-couple and female-headed families with and without own children under 18 by race/ethnicity. We use these counts to create a single measure of married-couples for each racial/ethnic group (white, black, Hispanic) by summing the number of married-couples with own children under 18 and those with no own children under 18 for each racial/ethnic category. We replicate this coding for female-headed family households to create a single sum of female-headed families for each racial/ethnic category. In the publicly available decennial census data, families are only classified as having own related children under 18 or no own children under 18. Therefore, if

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<sup>2</sup> It should be noted that non-Hispanic whites and blacks are those who have only checked one box for race. Thus, our analyses exclude anyone who identifies as multiracial. Further, we define race/ethnicity by householder race/ethnicity, meaning that we cannot explicitly examine multiracial families in our analyses, though they are undoubtedly contained in these analyses.

<sup>3</sup> We do not include male-headed households in these analyses as they make up less than 5% of the total households in the United States.

children are over 18 but live at home their family is classified as having no own children under 18. Due to the way the data are released, we cannot truly disaggregate families into those with and without children. The only way to overcome this data limitation would be to have access to specially tabulated data from the Census Bureau. We do, however, conduct sensitivity analyses reported in footnotes 8 and 9 below examining our analyses for families with own related children under 18.

Using these criteria, we identify six family types from the census family households: non-Hispanic white married-couple households, non-Hispanic black married-couple households, non-Hispanic white female-headed households, non-Hispanic black female-headed households, Hispanic married couples, and Hispanic female-headed households. Hereafter, we refer to non-Hispanic whites and blacks as simply whites and blacks. We limit the metropolitan areas included in our sample to those where there are at least 500 married-couple and 500 female-headed households in each racial/ethnic group (black, white, and Hispanic) at each census (1990, 2000, 2010)<sup>4</sup>. This ensures that all metropolitan areas have at least 1000 white, black, and Hispanic households at each time point.

These parameters yield 85 metropolitan areas for analysis, containing about 70% of all metropolitan blacks and about 60% of the nation's blacks, and about 84% of all metropolitan Hispanics and about 77% of the nation's Hispanic population. Since these analyses focus on the two most common family structures, and are longitudinal, they do leave out some groups which have smaller populations at earlier time points—Asian households, multiracial households, male-headed households, and nonfamily households. While excluding these other family types limits the scope of these analyses, we choose to focus our analyses on comparing white, black, and Hispanic married and female-headed households in these analyses to offer more depth rather than breadth to this study of the role of family structure in racial/ethnic residential segregation. Additionally, Asian households tend to have lower segregation from whites than black and Hispanic households do (e.g., [Charles 2003](#); [Iceland 2004](#); [Logan and Stults 2011](#)).

#### 4.1.2. National Historical Geographic Information System

As mentioned above, these analyses also use decennial census and 2006–2010 ACS data from the NHGIS (maintained by the Minnesota Population Center) for some of the metropolitan-level control variables to supplement the data extracted from the NCDB. As mentioned above, in 2010, only the short form of the Census questionnaire was administered, questions previously contained in the long form were moved to the ACS. Therefore, our 2010 control variables are contained in the ACS data and are largely drawn from the NHGIS. We use data from the 2006–2010 ACS so that all controls are collected prior to when isolation scores are calculated. Through the NHGIS, we are able to select Census and ACS data from all counties in 1990, 2000, and 2010 in 2010 metropolitan core-based statistical area (CBSA) boundaries. We then restrict these data to those counties included in 2010 CBSAs for analysis ([Manson et al. 2017](#)).

### 4.2. Measures

#### 4.2.1. Dependent Variable

Exposure indices assess the degree of potential contact between minority and majority group members within a given geographic space, such as a census tract. These indices attempt to capture the experience of segregation for group members by conceptualizing the likelihood of sharing neighborhoods with other group members ([Massey and Denton 1988](#)). There are two exposure indices, interaction and isolation. Here we focus on the isolation index. The isolation index measures the extent to which minority members are exposed to one another, this is computed as the minority-weighted

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<sup>4</sup> We also perform supplemental analyses using a threshold of at least 1000 in each group, which yields 51 metropolitan areas for analysis. We do not find substantially different results with regard to residential segregation by family structure using this larger threshold, so we elect to use the at least 500 threshold, to include more metropolitan areas in the analysis.

average for each census tract's minority proportion. The isolation index ranges from 0 to 1, with higher scores indicating greater isolation (Massey and Denton 1988). We calculate the isolation index for the following groups, black female-headed households, black married-couple households, Hispanic female-headed households, Hispanic married-couple households, white female-headed households, and white married-couple households.

#### 4.2.2. Control Variables

We also include a series of metropolitan-level control variables that have been shown to be related to racial/ethnic residential segregation in previous studies (e.g., Iceland et al. 2013; Marsh and Iceland 2010; Rugh and Massey 2014; Timberlake and Iceland 2007). Two of these control variables are specific to the racial/ethnic and family subgroup—percent group-specific poverty<sup>5</sup> and family group size<sup>6</sup>. In addition, we control for variables at the metropolitan level that could help to explain gaps in isolation scores between racial and ethnic groups like percent minority in the metropolitan area, percent foreign-born, and the ratio of minority/white income, which is gauged by the incomes of minorities and whites overall and not by family structure. We also include controls for functional specialization of the metropolitan area measured as, percent in manufacturing, government, military, over 65, and in college in the metropolitan area, and for percent of housing units built in the last ten years, percent owner-occupied housing, percent housing vacancy, region, log of the metropolitan area population, and dummy variables for year (2000, 2010 vs. 1990). Controls from the 1990 and 2000 censuses comes from the long form of the census (extracted from both the NCDB and the NHGIS). However, as discussed above, control variables are not available in the 2010 Census and are drawn from the 2006–2010 ACS 5-year estimates and are extracted from the NCDB and the NHGIS (except for the dummy variables indicating the region, which do not change across time).

#### 4.3. Analytic Strategy

We assess residential segregation of the six family types described above (white, black, and Hispanic married-couple and female-headed families) using the isolation index. We present average isolation scores for the 85 metropolitan areas that meet our selection criteria (at least 500 households in each group). We also present more detailed segregation analyses within this selection of metropolitan areas by percent black and percent Hispanic (less than 10%, 10–20%, and greater than 20%).

Similar to previous research, we control for population size within metropolitan areas rather than weighting these analyses (Iceland and Wilkes 2006). Metropolitan-level isolation scores for each racial/ethnic family structure group serve as the dependent variable in each set of analyses, yielding 1530 observations for the pooled model and 510 observations for the race-specific models (six racial/ethnic family group isolation scores at three time points for 85 metropolitan areas). We perform linear regression analyses by race/ethnicity as well as a pooled model, controlling for relevant factors that may influence residential segregation<sup>7</sup>. In each of these analyses, we use a dummy variable (or series of dummy variables) to indicate which segregation score is being examined. For instance, in row 1 of Table 5, we examine white female-headed family isolation from all other families relative to white married-couple family isolation from all other families. These regressions allow us to test our hypothesis that female-headed families are more isolated than married-couples.

If these multivariate analyses find that controlling for sociodemographic characteristics results in the full or substantial attenuation of segregation effects, we will find support for the spatial assimilation

<sup>5</sup> Percent group-specific poverty refers to the poverty rate of the group whose segregation is being examined. For example, when black married-couple isolation is being examined, the poverty rate is for black married-couple families.

<sup>6</sup> Family group size is the number of families in the specific family type, e.g., the number of black married-couple families in the metropolitan area.

<sup>7</sup> VIF scores in all multivariate regressions are 7 or below and are within the acceptable levels (Kunter et al. 2005). All assumptions for linear regression have been met.

model because the differences in socioeconomic and demographic characteristics will have accounted for the disparities in segregation. Conversely, if these effects remain, the analyses will reveal support for the tenets of the place-stratification model, suggesting that discrimination could be constraining housing opportunities based on race/ethnicity and family structure. Our analyses, disaggregated by race/ethnicity, highlight the interactions between race/ethnicity and family structure, emphasizing that some segments of the population face additional segregation risks than other members of the same racial/ethnic group.

## 5. Results

### 5.1. Isolation Index Results

Between 1990 and 2010, families have generally become less residentially isolated by race/ethnicity and family structure, but these changes have been small. Table 1 presents average isolation index scores for the 85 metropolitan areas included in our analyses. Isolation index scores are interpreted as the percent of the racial/ethnic family group in the neighborhood (census tract) where the average racial/ethnic family group member lives. By far, white married-couple families are the most isolated family type, on average across all metropolitan areas, among the families analyzed here. For example, in 2010, on average, the typical white married-couple family lived in a neighborhood where 0.68 or 68% of the families in the neighborhood were white married-couple families. The data show that the level of isolation declined only nine units since 1990. Black female-headed families have the second highest isolation scores, but they are much less isolated than are white married-couple families. In 2010, the average black female-headed family lived in a neighborhood where 19% of families in the neighborhood were black female-headed families, down from 22% in 1990. Black married-couple families also saw a slightly larger decline in their isolation between 1990 and 2010 (0.18 to 0.12). White female-headed family isolation remained relatively constant over time. Among Hispanic families, isolation scores increased for both married-couple (0.14 to 0.18) and female-headed families (0.07 to 0.10), though Hispanic female-headed families have the lowest isolation scores at each time point. In 2010, the average Hispanic female-headed family lived in a neighborhood that was only 10% Hispanic female-headed families.

**Table 1.** Average Isolation Index score for 85 metropolitan areas with at least 500 households in each category, using Census 1990–2010 from the NCDB.

	1990	2000	2010
Black married-couple	0.18	0.15	0.12
Black female-headed	0.22	0.21	0.19
White married-couple	0.77	0.73	0.68
White female-headed	0.13	0.13	0.14
Hispanic married-couple	0.14	0.17	0.18
Hispanic female-headed	0.07	0.09	0.10

Table 2 shows average isolation index scores for the 85 metropolitan areas analyzed in Table 1 by percent black in the metropolitan area. Isolation index scores for black families increase as the black population increases. For example, in 2010, black married-couple families have isolation scores more than 3.5 times as high in metropolitan areas where 20% or more of the population is black (0.25) than in metropolitan areas where less than 10% of the population is black (0.07). Black female-headed families also follow this same pattern. Notably, the isolation scores for whites are about the same regardless of the relative share of blacks in the metropolitan area. White married-couple families are slightly more isolated when the black population size increases, but white female-headed family isolation stays relatively constant. Hispanic families are less isolated as the percent black in the metropolitan area increases. Table 3 shows average isolation index scores for the 85 metropolitan areas analyzed in Table 1 by percent Hispanic in the metropolitan area. As the percent Hispanic increases, Hispanic

isolation increases, but white and black isolation decrease. Interestingly, the average isolation scores of white married-couple families are greater in metropolitan areas that are less than 10% Hispanic and 10–20% Hispanic than in the averages presented in Table 2 by relative shares of blacks. However, when the percent Hispanic is greater than 20%, the average isolation scores for white married-couple families fall below the figures presented in Table 2. Taken together, these results suggest that the isolation of white married-couple families depends upon the mix of out-groups present in the metropolitan area and are likely not the result of benign in-group preferences. White married-couple families are the least isolated, on average, when Hispanics comprised more than 20% of the metropolitan population.

**Table 2.** Average isolation for 85 metropolitan areas with at least 500 households in each category by percent Black population, using Census 1990–2010 from the NCDB.

	1990	2000	2010
Metropolitan areas <10% black (47)			
Black married-couple	0.12	0.10	0.07
Black female-headed	0.15	0.13	0.10
White married-couple	0.76	0.72	0.67
White female-headed	0.13	0.14	0.14
Hispanic married-couple	0.17	0.21	0.21
Hispanic female-headed	0.08	0.10	0.11
Metropolitan areas 10–20% black (25)			
Black married-couple	0.22	0.19	0.15
Black female-headed	0.29	0.29	0.27
White married-couple	0.79	0.75	0.70
White female-headed	0.13	0.13	0.14
Hispanic married-couple	0.11	0.15	0.15
Hispanic female-headed	0.07	0.09	0.09
Metropolitan areas >20% black (13)			
Black married-couple	0.31	0.29	0.25
Black female-headed	0.37	0.37	0.36
White married-couple	0.77	0.74	0.69
White female-headed	0.13	0.13	0.14
Hispanic married-couple	0.08	0.10	0.11
Hispanic female-headed	0.05	0.05	0.06

**Table 3.** Average isolation for 85 metropolitan areas with at least 500 households in each category by percent Hispanic population, using Census 1990–2010 from the NCDB.

	1990	2000	2010
Metropolitan areas <10% Hispanic (27)			
Black married-couple	0.22	0.20	0.16
Black female-headed	0.32	0.32	0.30
White married-couple	0.82	0.80	0.76
White female-headed	0.14	0.15	0.16
Hispanic married-couple	0.05	0.08	0.08
Hispanic female-headed	0.06	0.07	0.07
Metropolitan areas 10–20% Hispanic (19)			
Black married-couple	0.18	0.16	0.12
Black female-headed	0.24	0.22	0.19
White married-couple	0.82	0.79	0.74
White female-headed	0.13	0.14	0.15
Hispanic married-couple	0.08	0.12	0.14
Hispanic female-headed	0.08	0.10	0.11
Metropolitan areas >20% Hispanic (39)			
Black married-couple	0.15	0.12	0.09
Black female-headed	0.15	0.14	0.11
White married-couple	0.71	0.66	0.60
White female-headed	0.12	0.12	0.13
Hispanic married-couple	0.22	0.26	0.26
Hispanic female-headed	0.08	0.10	0.12

5.2. Descriptive Statistics

Table 4 presents descriptive statistics by year accounting for socioeconomic and demographic differences between families and/or race/ethnicity. The only socioeconomic variable that we have for all years by race/ethnicity and family type is the poverty rate, which is presented in columns 1 through 3. Across all families and years, married-couple families have lower poverty rates than female-headed families. Poverty rates for families by race/ethnicity decline from 1990 to 2000 and then increase again in 2010, which can likely be explained by the recession that occurred in the mid-to-late 2000s. White families experience the least change in their poverty rate across time, while black and Hispanic families experience a decline in poverty from 1990 to 2000 and then a slight increase in 2010. Black (32.3 to 41.9%) and Hispanic (32.5 to 40.1%) female-headed families consistently have the highest poverty rates, while white married-couple families have the lowest poverty rates at each time point and their poverty rate declines across time (3.7 to 2.8%).

While we present descriptive median income by family structure in 1990 and 2000, we only use the ratio of minority/white income in the multivariate analyses below, as median income by family structure is not available in 2010. Therefore, we cannot calculate group-specific median income at this time point. Median incomes increase for all families across time, with black and Hispanic families making about 2/3 of white family income, on average (columns 4–6 of Table 4). Regardless of race/ethnicity, female-headed families have incomes less than half those of their married-couple family counterparts. Across all of these family types, married-couple families saw a larger increase in their median income from 1990 to 2000 than female-headed families did (median income is not available by race/ethnicity and family type in 2010). Hispanic families are much more likely than black and white families to be foreign-born, but the share of foreign-born families increases for all groups across time (columns 7–9 of Table 4). Percent foreign-born is also not available by family structure in our data. Consistent with previous research (Iceland and Scopilliti 2008), the results show that the percent foreign-born among Hispanics, across all time points, is significantly larger than among whites and blacks.

**Table 4.** Socioeconomic and demographic characteristics of families by structure, 1990–2010 Census and 2006–2010 ACS from the NCDB and NHGIS.

	Percent in Poverty			Median Household Income (in Dollars)			Percent Foreign-Born		
	1990 (1)	2000 (2)	2010 (3)	1990 (4)	2000 (5)	2010 (6)	1990 (7)	2000 (8)	2010 (9)
Black	20.8%	17.5%	18.3%	\$27,669	\$40,529	\$51,912	3.9%	5.7%	9.2%
Married-couple families	9.4%	6.7%	7.1%	\$30,849	\$56,017	N/A			
Female-headed families	41.9%	32.5%	33.8%	\$13,333	\$23,908	N/A			
Hispanic	16.8%	15.3%	16.8%	\$29,809	\$40,777	\$49,881	22.9%	30.5%	30.8%
Married-couple families	11.1%	9.9%	10.4%	\$28,818	\$48,301	N/A			
Female-headed families	40.1%	32.3%	36.3%	\$13,718	\$22,175	N/A			
White	5.7%	4.7%	5.3%	\$40,318	\$59,899	\$78,793	2.8%	3.1%	3.5%
Married-couple families	3.7%	2.7%	2.8%	\$43,045	\$65,254	N/A			
Female-headed families	20.6%	16.7%	19.6%	\$22,118	\$32,365	N/A			

Note: In 2010, median household income is calculated from the 2006–2010 ACS and due to data limitations, it cannot be calculated for family types. Therefore, we use a ratio of the overall minority group’s median household income to white’s household income in our multivariate analyses. Nativity status is also not available by family type.

### 5.3. Multivariate Analyses for Isolation Indices

Table 5 presents multivariate linear regression models comparing isolation scores of each family type relative to the isolation score of white married-couple families<sup>8</sup>. Model 1 examines just the isolation scores and Model 2 adds group-specific and metropolitan-level control variables. In Model 1, all families are significantly less isolated than white married-couple families (column 1 of Table 5). When control variables are added in Model 2 (column 2 of Table 5), the differences in isolation between white married-couple families and all other families persist and the magnitude of the differences actually increase, suggesting support for the tenets of the place stratification model. Model 2 shows that controlling for relevant factors, white female-headed families' average isolation score is 0.62 units lower than the average isolation score of white married couple families. Model 2 in Table 5 also shows that Hispanic female-headed families' average isolation score is 0.71 units lower than the average isolation score of white married-couple families, controlling for group-specific and metropolitan-level variables. The gaps in average isolation scores between white married-couple families and the following groups—black married-couple families (0.58); black female-headed families (0.58); and Hispanic married-couple families (0.58)—are lower in magnitude, indicating that these groups experience more isolation than white and Hispanic female-headed families. These findings are also supportive of the tenets of the place stratification model, as they suggest that white married-couples are likely isolating themselves more when certain out-groups are present.

Table 6 replicates the analyses in Table 5 but examines isolation for families relative to isolation of black female-headed families. In Model 1, relative to black female-headed families, white married-couple families are significantly more isolated, while white female-headed, black married-couple, and Hispanic families (married-couple and female-headed) are significantly less isolated. When controls are added in Model 2, relative to black female-headed families, white married-couple families are significantly more isolated (0.5830), white and Hispanic female-headed families are significantly less isolated (−0.0382 and −0.1248, respectively). The coefficients gauging the isolation of black and Hispanic married-couple families from black female-headed families are not statistically significant. Taken together, and consistent with our descriptive analyses above, these results show that black female-headed families are not nearly as residentially isolated as white married-couple families, and they experience similar levels of isolation as their married black and Hispanic counterparts. However, black female-headed families are significantly more isolated than white and Hispanic female-headed families, controlling for other factors.

Several control variables also impact isolation scores for families in Tables 5 and 6 (control results are the same across these two tables). Group-specific poverty rates (0.0019) and the log of the metropolitan area population (0.0192) are positively associated with isolation scores. A greater percent of workers in the manufacturing industry decreases isolation (−0.0014) as does the percentage of housing units built in the last ten years (−0.0015). This finding supports existing literature that finds segregation levels are lower in metropolitan areas with more new construction, which are also coincidentally in the South and West where cities have more room to expand (e.g., [Farley and Frey 1994](#); [Iceland et al. 2013](#)). [Farley and Frey \(1994\)](#) find manufacturing cities have greater segregation, but in our model these cities have lower segregation, this could be due to changes in the location of manufacturing centers over the last few decades, as is discussed further in the summary and conclusion section. Isolation also varies by region with greater isolation in the Northeast (0.0262) and Midwest (0.0357) and lower isolation in the West (−0.0188), relative to the South. These results are consistent with previous studies finding greater segregation in the Northeast and Midwest and lower segregation in the South and West (e.g., [Iceland and Sharp 2013](#); [Iceland et al. 2013](#); [Logan and Stults 2011](#)). No other control variables are significant.

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<sup>8</sup> We perform supplemental analyses for these models using only families with own children under 18. We find the same pattern of results as shown in Tables 5 and 6, but the magnitude of the coefficients are smaller. Results available upon request.

**Table 5.** Linear regression models of the association between family structure and the Isolation Index relative to white-married couple families, using the 1990–2010 NCDB and 1990–2010 NHGIS.

	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>
	(1)	(2)
Isolation Scores (Ref: white married-couple families)		
White female-headed families	−0.5932 *** (0.0080)	−0.6212 *** (0.0133)
Black married-couple families	−0.5776 *** (0.0080)	−0.5840 *** (0.0141)
Black female-headed families	−0.5196 *** (0.0080)	−0.5830 *** (0.0213)
Hispanic married-couple families	−0.5666 *** (0.0080)	−0.5809 *** (0.0204)
Hispanic female-headed families	−0.6412 *** (0.0080)	−0.7078 *** (0.0198)
Group specific characteristics		
Group-specific poverty		0.0019 *** (0.0004)
Metropolitan Characteristics		
Ratio of minority / white income		0.0224 (0.0276)
Family group size		0.0000 (0.0000)
% minority families in metropolitan area		0.0004 (0.0004)
% female-headed families in metropolitan area		−0.0007 (0.0008)
Log of total population		0.0192 *** (0.0034)
% foreign-born		−0.0004 (0.0006)
Functional Specialization		
% in manufacturing		−0.0014 *** (0.0004)
% in government		−0.0017 (0.0009)
% in military		−0.0012 (0.0008)
% over 65		0.0004 (0.0010)
% in college		0.0017 (0.0012)
% of housing built in past 10 years		−0.0015 ** (0.0004)
% owner-occupied housing		−0.0002 (0.0008)
% housing vacancy		0.0004 (0.0009)
Region (Ref: South)		
Northeast		0.0262 ** (0.0097)
Midwest		0.0357 *** (0.0093)
West		−0.0188 * (0.0082)
Year (Ref: 1990)		
2000		−0.0036 (0.0048)
2010		−0.0075 (0.0067)
Intercept	0.7287 *** (0.0056)	0.4847 *** (0.0724)
F-statistic	1814.54 ***	896.51 ***
R-squared	0.8562	0.8743
N	1530	1530

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

**Table 6.** Linear regression models of the association between family structure and the Isolation Index relative to black female-headed families, using the 1990–2010 NCDB and 1990–2010 NHGIS.

	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>
	(1)	(2)
Isolation Scores (Ref: black female-headed families)		
White married-couple families	0.5196 *** (0.0080)	0.5830 *** (0.0213)
White female-headed families	−0.0736 *** (0.0080)	−0.0382 *** (0.0167)
Black married-couple families	−0.0580 *** (0.0080)	−0.0010 (0.0153)
Hispanic married-couple families	−0.0471 *** (0.0080)	0.0021 (0.0251)
Hispanic female-headed families	−0.1216 *** (0.0080)	−0.1248 *** (0.0166)
Group specific characteristics		
Group-specific poverty		0.0019 *** (0.0004)
Metropolitan Characteristics		
Ratio of minority/white income		0.0224 (0.0276)
Family group size		0.0000 (0.0000)
% minority families in metropolitan area		0.0004 (0.0004)
% female-headed families in metropolitan area		−0.0007 (0.0008)
Log of total population		0.0192 *** (0.0034)
% foreign-born		−0.0004 (0.0006)
Functional Specialization		
% in manufacturing		−0.0014 *** (0.0004)
% in government		−0.0017 (0.0009)
% in military		−0.0012 (0.0008)
% over 65		0.0004 (0.0010)
% in college		0.0017 (0.0012)
% of housing built in past 10 years		−0.0015 ** (0.0004)
% owner-occupied housing		−0.0002 (0.0008)
% housing vacancy		0.0004 (0.0009)
Region (Ref: South)		
Northeast		0.0262 ** (0.0097)
Midwest		0.0357 *** (0.0093)
West		−0.0188 * (0.0082)
Year (Ref: 1990)		
2000		−0.0036 (0.0048)
2010		−0.0075 (0.0067)
Intercept	0.2091 *** (0.0056)	−0.0983 (0.0770)
F-statistic	1814.54 ***	896.51 ***
R-squared	0.8562	0.8743
N	1530	1530

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

Table 7 presents racial/ethnic-specific models for black, Hispanic, and white families comparing the isolation score for female-headed families to that for married-couple families within each

racial/ethnic group<sup>9</sup>. These analyses allow us to explore within racial/ethnic variation in isolation scores by family structure. In Model 1 for black families, (column 1 of Table 7) female-headed families are significantly more isolated than married-couple families, which mirrors the descriptive results in Table 1. When controls are added in Model 2 (column 2) the coefficient for black female-headed families decreases slightly to 0.0576 but remains statistically significant. As was seen in Table 2, when the black population is larger in a metropolitan area, isolation is greater (% racial/ethnic group in metropolitan area (0.0107)). The log of the population of the metropolitan area is positively related to the log of the population (0.0239) as is the percent of people over age 65 (0.0044), while the percent employed in manufacturing (−0.0019) and the military (−0.0053) are negatively associated with isolation. When there are more housing units built in the last ten years, isolation is lower (−0.0025). Isolation is greater in the Midwest (0.0897) relative to the South and is lower in 2000 (−0.0404) and 2010 (−0.0494) than 1990.

In Model 1 for Hispanic families (column 3 of Table 7), female-headed families are significantly less isolated than Hispanic married-couple families (−0.0745). When controls are added in Model 2 (column 4) Hispanic female-headed family isolation remains significantly lower than that of Hispanic married-couples (−0.1195), with the magnitude of the difference actually increasing. Group-specific poverty is positively associated with isolation (0.0018) as is family group size (0.000<sup>10</sup>), and the percent Hispanic in the metropolitan area (0.0032). As was observed in the model for black families, percent employed in manufacturing is negatively associated with isolation (−0.0013), as is percent employed in government jobs (−0.0024). Isolation is greater in the Northeast (0.0321) and West (0.0096) relative to the South and greater in 2000 (0.0120) than 1990.

Finally, in Model 1 for white families (column 5 of Table 7), white female-headed families have significantly lower levels of residential isolation than white married-couple families (−0.5932). In Model 2 (column 6), white female-headed family isolation remains significantly lower than white married-couple family isolation (−0.6037). As in the case in the Hispanic model, the magnitude of the difference in isolation scores between white married-couple and female-headed families became larger with the inclusion of control variables in Model 6. Percent white in the metropolitan area is positively related to isolation (0.0032) as is the log of the population in the metropolitan area (0.0059). The percent employed in the military is negatively associated with isolation (−0.0010), as is the percent of units built in the last ten years (−0.0009). Isolation is greater in the Midwest relative to the South (0.0108) and in 2010 (0.0131) relative to 1990. Hispanic and white female-headed families have lower isolation than their married-couple counterparts, while black female-headed families are more isolated than their married-couple counterparts. Additionally, the significant controls in each model vary, likely because the mechanisms of isolation vary by race/ethnicity.

These results are consistent with existing studies finding when metropolitan areas have larger minority populations they also have greater segregation (e.g., [Iceland et al. 2013](#); [Rugh and Massey 2014](#)) and higher segregation scores in the Northeast and Midwest than the South and West, (e.g., [Iceland and Sharp 2013](#); [Iceland et al. 2013](#); [Logan and Stults 2011](#)). Additionally, our results are consistent with prior studies that find segregation has declined over time for black families (e.g., [Iceland et al. 2013](#); [Rugh and Massey 2014](#); [Timberlake and Iceland 2007](#)). The percent of housing units built in the last ten years decreases segregation in the overall and black segregation models. Again, this finding supports existing literature that finds segregation levels are lower in metropolitan areas with more new construction, which are often located in the South and West where cities have more room to expand (e.g., [Farley and Frey 1994](#); [Iceland et al. 2013](#)).

<sup>9</sup> As above, we perform supplemental analyses for each of these models using only families with own children under 18. We find a similar pattern of results to those in Table 7, though the magnitude of the effect is smaller for Hispanic and white families than in the models presented in the table. Results available upon request.

<sup>10</sup> This coefficient is likely so small because it is a frequency and other population measures are logged. However, when we included this as a logged variable the variance inflation factor (VIF) was much too high, using a raw count of family group size and log of overall metropolitan population yields VIFs within acceptable levels.

**Table 7.** Linear regression models of the association between family structure and the Isolation Index within race/ethnicity, using the 1990–2010 NCDB and 1990–2010 NHGIS.

	Black		Hispanic		White	
	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>	Coef./ <i>(s.e.)</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Isolation Scores						
Ref—Married-couple families	-----	-----	-----	-----	-----	-----
Female-headed families	0.0580 *** (0.0071)	0.0576 *** (0.0129)	−0.0745 *** (0.1621)	−0.1195 *** (0.0132)	−0.5932 *** (0.0060)	−0.6037 *** (0.0151)
Group specific characteristics						
Group-specific poverty		0.0000 (0.0004)		0.0018 *** (0.0004)		0.0008 (0.0007)
Metropolitan Characteristics						
Ratio of minority/white income		0.0033 (0.0290)		−0.0455 (0.0276)		-----
Family group size		−0.0000 (0.0000)		0.0000 ** (0.0000)		0.0000 (0.0000)
% racial/ethnic group in metropolitan area		0.0107 *** (0.0009)		0.0032 *** (0.0004)		0.0032 *** (0.0001)
Log of total population		0.0239 *** (0.0056)		0.0028 (0.0030)		0.0059 * (0.0024)
% foreign-born		−0.0010 (0.0006)		−0.0007 (0.0006)		0.0005 (0.0004)
Functional Specialization						
% in manufacturing		−0.0019 * (0.0007)		−0.0013 * (0.0005)		−0.0002 (0.0003)
% in government		−0.0022 (0.0013)		−0.0024 * (0.0009)		−0.0003 (0.0004)
% in military		−0.0053 ** (0.0017)		−0.0005 (0.0011)		−0.0010 * (0.0004)
% over 65		0.0044 ** (0.0015)		0.0005 (0.0008)		−0.0001 (0.0005)

Table 7. Cont.

	Black		Hispanic		White	
	Coef./(s.e.)	Coef./(s.e.)	Coef./(s.e.)	Coef./(s.e.)	Coef./(s.e.)	Coef./(s.e.)
	(1)	(2)	(3)	(4)	(5)	(6)
% in college		−0.0001 (0.0025)		0.0026 (0.0017)		0.0003 (0.0006)
% of housing built in past 10 years		−0.0025 ** (0.0007)		−0.0002 (0.0005)		−0.0009 ** (0.0003)
% owner-occupied housing		−0.0019 (0.0011)		−0.0004 (0.0008)		0.0003 (0.0005)
% housing vacancy		−0.0009 (0.0014)		−0.0011 (0.0008)		0.0002 (0.0006)
Region (Ref: South)						
Northeast		0.0236 (0.0151)		0.0321 ** (0.0091)		0.0066 (0.0052)
Midwest		0.0897 *** (0.0150)		0.0036 (0.0099)		0.0108 * (0.0050)
West		−0.0096 (0.0123)		0.0227 * (0.0096)		0.0053 (0.0046)
Year (Ref: 1990)						
2000		−0.0404 *** (0.0067)		0.0120 * (0.0050)		0.0047 (0.0025)
2010		−0.0494 *** (0.0090)		0.0008 (0.0085)		0.0131 ** (0.0039)
Intercept	0.1511 *** (0.0094)	−0.1312 (0.1150)	0.1621 *** (0.0049)	0.1124 (0.0899)	0.7287 *** (0.0042)	0.4093 *** (0.0493)
F-statistic	66.05 ***	81.96 ***	114.14 ***	74.52 ***	9633.00 ***	1168.34 ***
R-squared	0.0593	0.8110	0.1835	0.7036	0.9499	0.9774
N	510	510	510	510	510	510

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ .

## 6. Discussion

The primary goals of this study were to examine how family structure shapes racial/ethnic segregation in metropolitan America across time, and to test how well the tenets of the spatial assimilation and place stratification models account for such patterns of residential segregation. To fulfill these goals, our analyses examined isolation index scores for white, black, and Hispanic married-couple and female-headed families using 1990, 2000, and 2010 decennial census data and 2006–2010 ACS data from the NCDB and NHGIS.

First, our analyses ask, does residential isolation vary by race/ethnicity and family structure? Descriptively, we observe variation in isolation scores with white married-couple families being the most residentially isolated. Our multivariate results indicate that the controls for socioeconomic disadvantage (and other metropolitan-level factors) do not explain the disparities in isolation observed in the descriptive results. Further, these results indicate that social disadvantage is actually suppressing the disparities in isolation between white married-couple families and other families. Future studies should explore the specific mechanisms of this suppression. Our analyses add support to the body of literature, which argues that socioeconomic disparities cannot fully explain differences in racial/ethnic segregation (e.g., [Denton and Massey 1988](#); [Iceland and Wilkes 2006](#); [Intrator et al. 2016](#); [Sharp and Iceland 2013](#)). These results suggest overall support for the place stratification model, and that residential opportunities are unequally distributed by race/ethnicity and family structure. Additionally, our results indicate that descriptively, white married-couple family isolation varies based on the out-group mix in the metropolitan area. White married-couple families are more isolated when the percent Hispanic in the metropolitan area is less than 10% and 10–20% than in the overall descriptive results. However, when more than 20% of the metropolitan area is Hispanic, white married-couple families have isolation scores lower than their overall average. Our results offer support for the idea that white married-couple families are avoiding other families in the housing market, as has been suggested in the residential preferences literature (e.g., [Bader and Krysan 2015](#); [Clark 2009](#); [Krysan 2002](#); [Krysan et al. 2009](#)). Finally, our results for white married-couple families are similar to those from studies finding that white affluent families appear to be driving segregation (e.g., [Bischoff and Reardon 2014](#); [Reardon and Bischoff 2011](#); [Reardon et al. 2015](#); [Sharp and Iceland 2013](#)). Future studies should explore segregation at the nexus of race/ethnicity, family structure, and income.

Second, our analyses ask, among racial/ethnic groups, are female-headed families more isolated than their married-couple counterparts? Consistent with expectations derived from the place stratification model, both our descriptive results and multivariate results find that black female-headed families are more isolated than are their married-couple counterparts, but we find the opposite relationship among Hispanic and white families. Taken together, the results presented here provide support for hypotheses derived under the place stratification model. Even after the addition controls in the multivariate results, racial/ethnic family structure disparities remain in residential isolation. The difference in results by race/ethnicity is important. Black female-headed families experience greater levels of isolation than other racial and ethnic groups of the same family type. This has implications for the residential attainment of these families, as well as socioeconomic attainment. Black female-headed families are already disadvantaged in terms of their economic status and being residentially isolated could further exacerbate their poorer status. For whites and Hispanics, however, female-headed families do not experience such isolation; instead married-couple families are more isolated.

While this study is the first to explore patterns of residential segregation by race/ethnicity and family structure across time, it is not without limitations. First, our study only examines residential isolation. Future work should examine other measures of segregation as it is possible that other they will produce different results. Second, due to the difficulties in examining additional family structures in earlier Census data, we only examine segregation for white, black, and Hispanic married-couple and female-headed families. Family researchers have documented increasing family complexity (e.g., [Brown et al. 2015](#); [Brown et al. 2016](#)), and future studies should try and take this complexity into account. Finally, our analyses are conducted at an aggregate level. Future research should

seek to explore the residential attainment and mobility behavior of whites, blacks, Hispanics, and Asians disaggregated by family structure to better understand the microlevel dynamics that underlie segregation in the aggregate.

In conclusion, while scholars have long focused on variation in segregation by race/ethnicity (e.g., Iceland et al. 2013; Logan et al. 2004; Massey and Denton 1988; 1993), and more recently examined segregation by income (e.g., Bischoff and Reardon 2014; Reardon and Bischoff 2011; Reardon et al. 2015), our findings suggest that family structure is an important demographic lens through which to consider residential segregation. These results have demonstrated that family structure must be a piece of the puzzle for urban researchers when examining patterns of residential segregation, as race/ethnicity and family structure interact to shape segregation in metropolitan America.

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