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Black people don't exercise in my neighborhood: Perceived racial composition and leisure-time physical activity among middle class blacks and whites



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ABSTRACT

Using a sample of middle class blacks and whites living in urban and suburban areas, this article focuses on how perceptions of the racial composition of neighborhoods influence leisure-time physical activity. Using an ordinal representation of an underlying continuous indication of the perceived percentage of blacks and whites within an egocentric neighborhood, the results show that black men are significantly less likely to be physically active in neighborhoods perceived as predominately white. Alternatively, they are more likely to be physically active in neighborhoods perceived as racially diverse and predominately black. Conversely, for black women, white women, and white men, physical activity increases as the perception of one's neighborhood becomes increasingly white. Black women are significantly less likely to engage in physical activity in neighborhoods perceived as predominately black and urban. Drawing upon the intersectionality framework, I discuss how perceptions of criminalization and safety lead to different levels of leisure-time physical activity for middle class black women and men relative to their white middle class counterparts.

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Physical activity is linked to reducing obesity, morbidity, mortality, chronic diseases, and depression ([National Center for Health Statistics, 2010](#); [Stensvold et al., 2011](#); [Katzmarzyk and Lear, 2011](#); [Lee et al., 2012](#)). Despite these benefits, most Americans do not engage in the recommended amount of physical activity ([U.S. Department of Health and Human Services, 2008b](#); [Mendes, 2009](#); [National Center for Health Statistics, 2010](#)). As is the case with other health-related behavior, there are racial differences in physical activity. Approximately half of blacks and one-third of whites over 18 are physically inactive ([National Center for Health Statistics, 2010](#)). Research shows that, in general, the higher one's social class, the more likely he or she is to be physically active ([Tudor-Locke and Bassett, Jr. 2004](#)). However, among blacks, social class does not explain the high prevalence of physical inactivity ([Bennett et al., 2007](#); [Coogan et al., 2011](#)).

So, why are middle class blacks less physically active than their white middle class counterparts? This focus on the middle class, and the black middle class in particular, is important for two reasons. First, it permits holding social class constant to compare individuals with similar occupations, levels of education, and income. Second, the black middle class is viewed as an example of racial progress. In this case, the high level of obesity and physical inactivity among middle class blacks stalls this progress because a higher social class status does not seem to provide the same health benefits to blacks as it does to whites (see [Thomas and Thomas, 2015](#)).

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While neighborhood resources (Williams and Collins, 2001; Schulz et al., 2002; Bennett et al., 2006; Gordon-Larsen et al., 2006) are shown to be an important factor in increasing or decreasing physical activity, Oka et al. (2011) found that the physical activity and food environments of local areas do not sufficiently explain the obesity rates of local residents. In other words, there are other factors (in addition to neighborhood resources) contributing to these differences. I argue that one key factor that may contribute to this problem is how individuals perceive the racial composition of their neighborhoods. These perceptions manifest in schemas related to criminalization and safety. These schemas may, in turn, decrease leisure-time physical activity for black men in certain neighborhoods and black women in others.

Utilizing the intersectionality framework and drawing upon a sample of middle class blacks and whites living in urban and suburban neighborhoods, I examine how perceptions of neighborhood racial composition influence racial and gender differences in leisure-time physical activity. I do not assume racial or gender homogeneity and instead explicitly compare the experiences of black women, black men, white women, and white men. Below, I first discuss the theoretical and methodological utility of the intersectionality framework for this analysis. Then, I use existing literature on neighborhood segregation and discrimination to interrogate how the racial composition of neighborhoods may lead to different levels of leisure-time physical activity for middle class blacks and whites. I do not purport to provide an exhaustive review of the literature. Rather, the background section focuses on research that speaks to the role of perceptions and racial composition in decision-making processes and behavior.

1. Background

1.1. Utility of intersectionality for health disparities

The intersectionality framework can be a useful theoretical and methodological tool for broadening the breadth of research on health disparities and intersectional identities (Cummings and Jackson, 2008; Wilkins, 2012; Bauer, 2014; Brown et al., 2016). The purpose of the intersectionality framework is to provide a lens to construct a space for the multiplicity of social identities that provide context-specific scripts for marginalized groups (Few et al., 2003; McCall, 2005).

The multiplicity of social identities captured in the cross-classification of race and gender social status indicators “focuses on the complexity of relationships among multiple social groups within and across analytical categories” (McCall, 2005, p. 1786). Taking a similar approach to prior health disparities research (Cummings and Jackson, 2008), the analysis in this paper compares the level of leisure-time physical activity of four race-gender groups—black women, black men, white women, and white men rather than simply controlling for race or gender in a statistical model. In this case, interaction variables or separate models (one for each race-gender group) can be used to examine intergroup and intragroup differences. The context-specific scripts are the perceptions that individuals form about the racial composition of their neighborhoods. These perceptions stem from the social interactions individuals have with others in and around their neighborhoods. These social interactions are often influenced by the race and gender identities of the individuals in the interaction.

This intersectional perspective is what McCall (2005) calls the “intercategorical complexity” (or categorical) approach. Choo and Ferree (2010, p. 134) call this approach the “process-centered model of intersectionality.”¹ As I do here, this sort of analysis is able to explicitly compare the outcomes of black women, black men, white women, and white men. This analysis can also examine the effects of specific covariates for each group. This approach “begins with the observation that there are relationships of inequality among already constituted social groups, as imperfect and ever changing as they are, and takes those relationships as the center of analysis ... The subject is multigroup, and the method is systematically comparative” (McCall, 2005, p. 1784–1786). For example, in their examination of self-rated health from 1974 to 2004, Cummings and Jackson (2008) find that black women with a college degree reported lower levels of self-rated health than black men, white women, and white men with a high school degree. In this regard, intersectionality becomes vital theoretically, methodologically, and empirically for illuminating the shortcomings of social class.

Accordingly, the approach used in this paper is in some ways similar to previous research examining the relationship between the racial composition of neighborhoods and the race and social class of local residents (Alba and Logan, 1993; Logan et al., 1996). I extend this work by focusing on how the intersection of race, gender, and social class identities as well as perceptions of neighborhood racial composition and neighborhood resources influences physical activity. Moreover, I compare how the perceived racial composition of neighborhoods impacts leisure-time physical activity across four race-gender groups.

¹ Admittedly, McCall (2005) takes a fairly pessimistic view that quantitative intersectionality research employing the categorical approach can get published in “top peer-reviewed journals” (p. 1787). In fact she states, “Indeed, there is much hostility toward such complexity; most journals are devoted to additive linear models and incremental improvements in already well-developed bodies of research” (McCall, 2005:1787). However, there are some examples to draw upon to push this agenda forward, including McCall’s (2001) own work that employs the categorical approach. Another example is Noy and Ray’s (2012) quantitative examination of graduate students’ perceptions of their advisors that provides a blueprint of the categorical approach. Using a data set of roughly 4000 doctoral students in 11 disciplines at 27 universities, Noy and Ray (2012) utilize the intersectionality framework to test whether women of color report less advisor support than White women, men of color, and White men. Thus, this analysis is specifically comparing the experiences of four different groups in different disciplines. These scholars found that women of color (across all disciplines) report less instrumental support (compared to White women and White men) and less respect for their ideas (compared to White women, White men, and men of color). Representing the categorical approach to intersectionality, I employ the same type of analysis in this article for examining racial and gender differences in physical activity.

Choo and Ferree (2010) argue that the categorical or process-centered approach to intersectionality “runs the risk of focusing on abstract structures” by downplaying individuals’ agency who are simultaneously “experiencing the impact of micro- and meso-interactions” (p. 134). They state that researchers can overcome this limitation by focusing on “cultural meanings and the social construction of categories” (Choo and Ferree, 2010, p. 134). Taking the concrete steps outlined here overcomes this limitation by grounding this analysis in perceptual measures of residential context that capture how social constructions about neighborhoods shape physical activity. In this regard, individual agency is inherently present in the study.

Collectively, the intersectionality framework suggests that race- and gender-based experiences affect how perceptions of the racial composition of neighborhoods impact leisure-time physical activity. These perceptions shape the process that black women, black men, white women, and white men undergo to make determinations about which spaces to engage in physical activity. If these spaces are racialized or gendered, physical activity may be less prevalent for certain groups embedded in certain social contexts, while physical activity may be more prevalent for certain groups embedded in different social contexts. Although intersectionality is normally applied to black women, it is also applicable to black men (López, 2013; Gilbert et al., 2016; Gilbert and Ray, 2016). Similar to black women, black men’s identities straddle the intersection of race and gender. While black women experience sexualization, black men are more prone to experience criminalization. Criminalization may lead to less leisure-time physical activity for black men depending on the racial composition of the neighborhood.

1.2. Intersectional variations of the middle class neighborhood experience

Middle class neighborhoods, compared to lower class neighborhoods, are normally more desirable because they have better schools, higher appreciating homes, and less crime (Charles, 2003; 2006). For leisure-time physical activity, middle class neighborhoods normally offer more facilities, organized programs, and green, walkable, and safe spaces (Bennett et al., 2007; Papas et al., 2007). Based on these characteristics, it is expected that leisure-time physical activity may increase in these neighborhoods for individuals regardless of race. However, research on segregation and discrimination suggests that we cannot assume that the experiences and behaviors of whites and blacks in the same neighborhood context are similar (Alba and Logan, 1993; Logan et al., 1996; Laveist and Wallace, 2000; LaVeist et al., 2011).

Most neighborhoods, regardless of the social class of the residents, are shaped by racial segregation leading to most being either predominately white or predominately black, even in the suburbs (Alba and Logan, 1993; Massey and Denton, 1993; Charles, 2003). Accordingly, there are some key differences between predominately black and white neighborhoods that may structure leisure-time physical activity. First, on average, predominately black neighborhoods have fewer resources than predominately white neighborhoods (Pattillo-McCoy, 1999; Charles, 2003). More specifically, predominately black neighborhoods have fewer facilities for leisure-time physical activity and fewer green and walkable spaces. Second, predominately black neighborhoods are typically objectively less safe. Objective forms of safety can be measured as a resident’s exposure to violent crime (e.g., murder, vandalism, robbery) and other factors like poverty rates.

However, subjective forms of safety also matter. Speilman and Yoo (2009: 1098) “argue that representations of these spatial concepts [such as neighborhood or built environment] in statistical models should be based upon the individuals, the place, and the problem under study.” Duncan and colleagues (2014: 379) argue for egocentric conceptualizations of neighborhoods. They assert that specifying a radius around a particular location, such as a home residence, should be used “whenever possible.” Egocentric neighborhoods are important considering that neighborhood residents often have varying proximities of how they view their neighborhoods (boundary lines and race and class compositions) based on their neighborhood exposure. Using data from the Los Angeles Family and Neighborhood Survey (L.A.FANS), Sastry et al. (2002) found that respondents definitions of their neighborhoods varied from a block or street, several blocks or streets, a 15 min walk, and over a 15 min walk. Giving neighborhood residents the autonomy to define boundaries and characteristics of their built environment may be an important measure to include when assessing neighborhood factors. Therefore, my research extends this literature by proposing that perceptions of egocentric neighborhoods are important to circumvent erroneous measurements of neighborhoods. Nonetheless, it is important to note that though this approach may be sufficient for social psychologists, it is a demarcation from research on neighborhood effects that bound a radius around a specific neighborhood (see Auchincloss et al., 2009; Duncan et al., 2014; Lê-Scherban et al., 2014). In this regard, some scholars may view my approach to be a limitation for studying neighborhoods.

Regarding perceptions in egocentric neighborhoods, research shows that a lack of lighting and open spaces as well as the mere presence of blacks increases perceptions that a neighborhood is less safe (Bennett et al., 2007; Feagin, 2008; McConaughy and White, 2011). Perceptions of less safety may increase in predominately black neighborhoods because they are more likely to be situated in or closer to working class or poor areas (Pattillo-McCoy, 1999; Sharkey, 2014). This positioning leads to a spillover effect that suggests predominately black neighborhoods are ubiquitously less safe than predominately white neighborhoods. Additionally, neighborhoods that are black and middle class tend to be lower middle class relative to white middle class neighborhoods (Pattillo-McCoy, 1999; Sharkey, 2014). Research on European countries, however, finds that the percentage of racial/ethnic minorities matters for perceptions of safety in a neighborhood even after controlling for objective exposure to crime (Semyonov, 2012). Robert et al. (2016) even find that neighborhood perceptions of parents influence the physical activity of children. Nonetheless, research shows that neighborhoods with fewer facilities and less safety have less leisure-time physical activity and worse health outcomes among their residents (Laveist and Wallace, 2000; Papas et al., 2007). Therefore, I hypothesize that neighborhoods perceived as predominately black will also be perceived as having fewer resources and being less safe relative to neighborhoods perceived to have fewer black residents.

Based on the neighborhood profiles detailed above, it seems that individuals living in predominately white neighborhoods would engage in more physical activity regardless of race. Yet, researchers note that the implications of segregation operate differently by race (Alba and Logan, 1993; Logan et al., 1996). I am arguing that segregation may also operate differently at the intersection of race and gender. Although middle class white men as well as women (as women are primarily affected by safety and perceptions of safety more than men) may engage in more physical activity in predominately white neighborhoods (Bennett et al., 2007), black men may experience a heightened level of criminalization in predominately white neighborhoods that results in less physical activity. Research on black men in public spaces asserts that predominately white environments lead to a heightened level of visibility and racial profiling for black men that may result in less community engagement (Feagin and Sikes, 1995; Houts Picca and Feagin, 2007; Feagin, 2010; Ray and Rosow, 2012). In his examination of the social relations between whites and blacks in the 21st century, Feagin (2010) finds that whites have limited social class cues to tell differences among black men (i.e., professor, lawyer, delivery man, criminal). Feagin states, “Many whites have fearful reactions to a black man encountered on streets, in public transport, and in elevators” (Feagin, 2010, p.108). Compared to other race-gender groups, McConaughy and White (2011) find that whites perceive black men as more violent, unpleasant, promiscuous, unintelligent, and less ambitious and nurturing. Psychologists document that some whites are more likely to perceive black men as aggressive, have a similar fear of black men as they do of snakes and spiders, and are more likely to pull the trigger of a gun quicker on an unarmed, black man compared to an unarmed, white man, and even at times an armed white man (Eberhardt et al., 2004; Correll et al., 2006; Trawalter et al., 2008). Consequently, most black men become criminalized, even middle class black men who live next door to whites in middle class neighborhoods.

Middle class black men's experiences with whites start long before they move into predominately white neighborhoods. As teenagers, blacks are more likely to be perceived as adults (Rattan et al., 2012). Experiences in college often help shape middle class black men's perceptions of interacting in predominately white environments. While collegiate white men are able to gain purchase on their high-status because a white racial identity affords them certain advantages in public spaces and predominately white environments (e.g., ability to blend into a crowd, interact as individuals, and experience a lack of accountability for the behavior of other white men), collegiate black men experience a hyper-level of visibility and more policing in these same spaces (Ray and Rosow, 2012; Ray, 2013). This heightened level of visibility increases the likelihood of unjust treatment, which leads to more stress and less community engagement. If black men are less likely to engage in their community due to profiling and policing, they also may be less likely to walk, run, or engage in other forms of leisure-time physical active in these neighborhoods. *Therefore, I hypothesize that middle class black men will be less likely to engage in physical activity in neighborhoods perceived as predominately white.*

Although middle class black men may be less physically active in predominately white neighborhoods, they may actually be more physically active in predominately black neighborhoods. Predominately black neighborhoods may provide a level of comfort as black men are less likely to be hyper-visible and racially marked (Pattillo-McCoy, 1999). Some of these public spaces include parks and gyms. While predominately black neighborhoods are often less safe, Bennett et al. (2007) find that safety concerns do not affect men's level of physical activity.

Nonetheless, the benefits that predominately black neighborhoods afford black men in terms of comfort for leisure-time physical activity may not exist for black women. First, women, unlike their male counterparts, are affected by safety concerns. Bennett et al. (2007) find that women are significantly less likely to be physically active as safety concerns increase. Second, well-resourced neighborhoods, which are also more likely to be middle class and predominately white, have facilities and programs that cater specifically to women. These “women-only” zones may provide protection from “catcalling” and the male gaze while women engage in physical activity (Ray, 2014).

Third, middle class black women receive fewer returns on their education for income and are more likely to be single mothers than other race-gender groups in the middle class (Cummings and Jackson, 2008; Ray, 2014). Consequently, they may have less income to devote to the housing market. In turn, their neighborhoods may have fewer resources and less safety than other individuals in the middle class. On average, predominately black neighborhoods, regardless of social class composition, have fewer facilities and programs that cater to the childcare needs of working mothers (Charles, 2003). Childcare is important considering that the family-work life literature shows “that women are still pulling the ‘second shift’ at home by having to do most of the caregiving and housework after they come home from their paid jobs. Black women, compared to white women, are more likely to work full-time, less likely to be married, and more likely to have children in the home” (Ray, 2014, p. 783). *Taken together, I hypothesize that black women will be less likely to engage in physical activity in neighborhoods perceived as predominately black.*

2. Methods

In order to test the three hypotheses detailed above, I used data from a larger study entitled the “The Barriers and Incentives to Physical Activity Survey.” I constructed the survey and hired Qualtrics to use their pre-existing national panel of Americans to obtain a sample of college-educated blacks and whites. To my knowledge, “The Barriers and Incentives to Physical Activity Survey” is the only dataset that includes a sample of blacks and whites who have all obtained a bachelor's degree or above, an oversample of middle class black women, and measures on neighborhood perceptions and physical activity. Qualtrics recruited respondents through various sources using techniques and online campaigns designed to attract a sample of middle class blacks and whites. Qualtrics' techniques are able to tap into how individuals are motivated to participate in research studies in an online environment. Based on these techniques, Qualtrics has compiled a participant

community for online surveys. All panel participants are pre-screened to fit a specific study and consent to participate. Panel members are provided with various methods to opt-out of a survey.

Similar to other online panel platforms, such as GfK Knowledge Networks Panel, Qualtrics allows researchers to make sample specifications to maximize group comparisons. To examine barriers to physical activity among middle class blacks and whites using an intersectionality framework, this study oversampled black women, only included respondents with a bachelor's degree or higher, limited the age range to 22–64, sampled only employed respondents (full- or part-time) living in either urban or suburban neighborhoods, and targeted all regions of the United States.

Given the utility of the intersectionality framework, oversampling black women allowed me to focus more acutely on this overlooked group. Additionally, it allowed me to overcome the limitations of previous studies that have relied on small samples to make claims about blacks (see Tudor-Locke and Bassett, Jr. 2004). Given respondents' income and education levels, they are considered to be well within the middle class category (Hout, 2008; Hunt and Ray, 2012). The age restriction allowed me to capitalize on individuals who are beyond college but not to retirement age, most likely to have children, and most likely to work for pay (U.S. Census Bureau, 2010). Considering that the United States was in the middle of a recession during data collection, I restricted the analysis to individuals currently in the paid labor force. This decision reduces the chance that a respondent's unemployment status may decrease leisure-time physical activity due to links with depression and other stressors (Camacho et al., 1991).

In spite of the viability of these data, there are some limitations. First, some may have concerns about the total number of respondents. Using the *powerlog* command in STATA, the power analysis reveals that over 100 cases are sufficient to compare black women to other groups. Considering that Long (1997) argues that 500 cases are adequate in most situations, the 482 observations used in this study should not be a concern since each group has enough respondents to make the comparisons shown in the paper. Second, the survey was conducted online. Given the increasingly low response rate of telephone surveys, researchers are starting to realize the potential of online surveys. Research shows that Internet-based panel studies are more reliable than in-person convenience samples. Besides online samples being more educated and politically engaged, they are similar to national probability samples (Berinsky et al., 2010). Considering my focus on the middle class, these sample differences can actually be considered strengths. Next, the survey relies on self-reported data. Obviously, it is ideal to have actual behavior when gauging physical activity. This study, however, is more about how self-perceptions shape leisure-time physical activity. Furthermore, very little is known about the relationship between the perceived racial composition of neighborhoods and leisure-time physical activity, particularly across race and gender lines among the middle class.

2.1. Dependent variable

To examine leisure-time physical activity, I used a survey question that asked the following: “Within the past 7 days, how many times did you engage in at least 30 min of physical activity? Some activities may include running, swimming, walking, lifting weights, or cycling.” Physical activity is coded into three categories: little, moderate, and extreme. Little physical activity encompasses 0–2 times of exercise per week, moderate physical activity encompasses 3–5 times of exercise per week, and extreme encompasses 6–7 times per week.

While the survey includes physical activity measures for home, work, and commuting, there were no significant differences across race-gender groups for these measures (with the exception of white women for physical activity at work because they are less likely to work full-time). As I detailed above, respondents have high levels of socioeconomic status and have very similar professional and family lives. This sampling design was purposeful. For example, over 85% of the sample report driving their own car to work. As a result, I am only concerned with leisure-time physical activity classified as exercise and fitness rather than physical activity at home or work. If I was comparing blacks and whites among the broader U.S. population, occupation may become important, particularly among men where manual labor jobs may increase physical activity. Considering that I am focusing strictly on the middle class, most professional jobs require very little physical activity. This is the case with this sample.

2.2. Independent variables

Regarding the egocentric perceived racial composition of neighborhood variables, respondents were asked, “What percentage of the families in your neighborhood is white, black, or other minority group?” People view family to include an assortment of different household arrangements (Powell et al., 2010). Each group (white, black, other minority) had its own bar line in the online survey. Qualtrics set up the question where respondents were able to move a bar line left or right depending on the percentage they wanted to select for each category. Respondents had to select percentages that totaled all 3 bar lines to 100 percent. For example, one respondent selected 75% for black, 15% for white, and 10% for other minority. I only include perceptions of black and white families in the neighborhood in the analysis. I created an ordinal representation variable of these two continuous measures of the percentage of blacks and whites within an egocentric neighborhood where 0 = predominately black as 70–100% black; 1 = racially diverse as less than 70% black and less than 70% white; and 2 = predominately white as 70–100% white.

Respondents were also asked Likert-scale questions about their neighborhoods. Ranging from strongly disagree {1} to strongly agree {6}, respondents were asked, “How much do you agree that [programs, facilities, transportation, safety, or affordability] decrease your physical activity?” These questions correspond to previous research on barriers to physical

activity that simply provide respondents with a list of barriers and ask how important each barrier is to maintaining physical activity (Canadian Fitness and Lifestyle Research Institute, 1996; Chinn et al., 1999; O'Dea, 2003).

2.3. Control variables

Self-rated health ranges from 1 {poor} to 5 {excellent}. Age is a continuous variable ranging from 22 to 64. Education is categorized into three groups (bachelor's degree, master's degree, or M.D./Ph.D./J.D.). Full-time employment is a dummy variable for whether respondents work full- or part-time. Work hours is a continuous variable. Household income is a 6-category variable (0 = less than \$20,000; 1 = \$20,000–\$29,999; 2 = \$30,000–\$49,000; 3 = \$50,000–\$74,999; 4 = \$75,000–\$99,999; and 5 = \$100,000 or higher). Marital status is coded as married, never married, cohabiting, and divorced. The Children living in the home variable = 1 for children present. Region is coded as East, West, Midwest, and South according to U.S. census categories. Urban = 1 if respondents perceive they live in an urban neighborhood and 0 if they perceive living in a suburban neighborhood.

Of obvious importance to a study on leisure-time physical activity is weight. The survey asked respondents their weight and height. I then computed BMI with the following equation:

$BMI = (\text{Weight (lbs)} / (\text{Height (in)}^2)) \times 703$. Although body fat percentage is best measured with DEXA scans or hydrostatic underwater weighing (most fitness centers still use skin-fold calipers), BMI is commonly used by the CDC, healthcare professionals, and researchers as a quick and predictable way to determine a person's health risks and assess group differences (U.S. Department of Health and Human Services, 2009).

2.4. Sample description

The descriptive statistics for the sample can be seen in Table 1. The findings presented here are based on 482 respondents all of whom have at least a bachelor's degree.² Fifty-four percent of respondents are black women, while the remaining 46% are black men (16.2%), white women (13.5%), and white men (16.0%). To put in perspective how suitable this survey is for this analysis, the 2010 wave of the General Social Survey, which is the most widely used data set in sociology, only includes about 50 blacks with a bachelor's degree after missing data (Hunt and Ray, 2012).

Self-reported health is similar across groups. Whites are older and blacks are more likely to have graduate degrees. A higher percentage of white men, compared to black women and white women, are more likely to be employed full-time and have a household income of \$75,000 to \$99,999 a year. While white women are more likely to make \$50,000 to \$74,999 a year compared to other race-gender groups, they are less likely to make \$100,000 a year or more. Given that a 2011 Pew Study found that blacks have to make \$75,000 a year, compared to just \$40,000 a year for whites, in order to live in what most would consider "good" neighborhoods (e.g., high percentage of homeowners, low crime rate, above average schools, sufficient community resources like workout facilities and parks, and on par appreciating home values), the percentage of black women and black men in this sample with high levels of education and household income suggests that they may be less likely to live in the poor neighborhoods that are ubiquitously classified as predominate black.

While white women are slightly less likely to be currently married than black women, a much larger percentage of black women are never married (40.5%) compared to white women (21.5%). Similar to national trends (U.S. Census Bureau, 2010; Banks, 2011), black women are more likely than white women to have children living in the home. Expectedly, a larger percentage of blacks live in the South. All groups are more likely to live in the suburbs fitting the description of middle class individuals currently living in the United States. Similar to national trends (National Center for Health Statistics, 2010), black women are more likely to be obese, white women are more likely to be in the normal range, and men are more likely to be overweight.

2.5. Analysis

First, I conducted mean testing on the variables used in the analysis. I performed a series of t-tests on the descriptive statistics, physical activity categories, and the ordinal perceive racial composition measure to determine differences across race-gender groups for key sociodemographic factors, the dependent variable, and independent variables (Tables 1–3). Second, I performed a series of t-tests on perceptions of neighborhood resources by the perceived racial composition categories (Table 4 directly testing hypothesis 1). Third, based on logistic regression models, I present a margins plot of the predicted probabilities of the association between perceived racial composition and leisure-time physical activity for the four race-gender groups (Fig. 1). This figure shows intragroup and intergroup differences. For the logistic regression models, physical activity is coded as 1 if respondents engage in physical activity at least three times per week (0 = little physical activity).

Finally, I present three tables that include logistic regression models by race-gender group (Table 5) as well as for urban (Table 6) and suburban (Table 7) neighborhoods. These tables directly test hypotheses 2 and 3. In Tables 6 and 7, white women

² The original sample was 500 respondents, but 18 respondents were omitted because they identified as multiracial. There are no differences when coding these respondents as black. However, I chose to restrict the analysis to those who self-identified as either black or white.

Table 1
Descriptive statistics for sample.

	Black women ^a	Black men	White women	White men	Description
Percentage of Sample	54.4%	16.2%	13.5%	16.0%	
Number of Respondents	262	78	65	77	
Self-reported Health	3.5 (0.89) ^b	3.4 (0.99)	3.4 (0.95)	3.5 (0.93)	1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, 5 = Excellent
Age	41.1 ^{WW, WM}	41.8 ^{WW, WM}	45.6 ^{BW, BM}	46.3 ^{BW, BM}	Age of Respondent; 22–64
Bachelor's Degree	43.5% ^{WW, BM, WM}	60.3% ^{BW}	64.6% ^{BW}	61.0% ^{BW}	
Master's Degree	45.0% ^{BM, WM}	28.2% ^{BW}	32.3%	32.5% ^{BW}	
M.D./Ph.D./J.D.	11.5% ^{WW}	11.5%	3.1% ^{BW}	6.5%	
Full-time	83.2% ^{WM}	88.5%	80.% ^{WM}	92.2% ^{BW, WW}	
Work Hours	42.7 (12.32) ^{WM}	43.9 (10.21)	40.7 (11.92) ^{WM}	46.0 (10.10) ^{BW, WW}	Number of Work Hours
Household Income					
Less than \$20,000	5.3%	3.9%	6.2%	1.3%	
\$20,000–\$29,999	5.7%	6.4%	7.7%	3.9%	
\$30,000–\$49,000	22.1%	15.4%	23.1%	14.3%	
\$50,000–\$74,999	23.7% ^{WW}	29.2%	41.5% ^{BW, WM}	26.0% ^{WW}	
\$75,000–\$99,999	17.2%	12.8% ^{WM}	12.3% ^{WM}	24.7% ^{BM, WW}	
\$100,000 or more	26.0% ^{WW}	32.1% ^{WW}	9.2% ^{BW, BM, WM}	29.9% ^{WW}	
Marital Status					
Married	40.5% ^{BM, WM}	57.7% ^{BW, WW}	38.5% ^{BM, WM}	58.4% ^{BW, WW}	
Never Married	40.5% ^{WW, WM}	30.8%	21.5% ^{BW}	27.3% ^{BW}	
Cohabit	5.0% ^{WW}	6.4% ^{WW}	20.0% ^{BW, BM, WM}	6.5% ^{WW}	
Divorced	14.1% ^{BM}	5.1% ^{BW, WW}	20.0% ^{BW, BM}	7.8% ^{WW}	
Children Living in Household	50.8% ^{WW}	47.40%	35.4% ^{BW}	41.60%	
Region					
East	27.9% ^{BM}	16.7% ^{BW, WW}	35.4% ^{BM}	27.30%	
West	6.5% ^{WW, BM, WM}	19.2% ^{BW}	26.2% ^{BW}	15.6% ^{BW}	
Midwest	22.5%	14.1%	13.8%	26.0%	
South	43.1% ^{WW}	50.0% ^{WW, WM}	24.6% ^{BW, BM}	31.2% ^{BM}	
Urban	39.3% ^{WM}	43.6% ^{WM}	35.4%	23.4% ^{BW, BM}	
Suburban	60.7% ^{WM}	56.4% ^{WM}	64.6%	76.6% ^{BW, BM}	
BMI					Body Mass Index according to CDC standards
Underweight	3.4%	1.3%	3.1%	2.1%	
Normal	29.4% ^{WW}	23.1% ^{WW}	44.6% ^{BW, BM, WM}	28.6% ^{WW}	
Overweight	33.2%	44.9% ^{WW}	21.5% ^{BM, WM}	42.9% ^{WW}	
Obese	34.0%	30.8%	30.8%	26.5%	

Notes:

^a BW=Black Women; BM=Black Men; WW=White Women; WM=White Men; Superscripts show significant differences at the .05 level with two exceptions; For the \$75,000–\$99,999 category, p-value is .059 for black men and white men and .062 for white women and white men.

^b Standard Deviations in parentheses.

and white men are in the same model because their levels of physical activity are not significantly different (see Table 2) and the sample sizes are small for specific comparisons. Using a stepwise approach, the first model for each race-gender group displays two independent variables (neighborhoods perceived as predominately white and neighborhoods perceived as predominately black) with neighborhoods perceived to be racially diverse as the reference category. The second model includes BMI, self-rated health, and age. The third model includes marital status, number of children in the home, household income, and work hours. The fourth model includes region, urban neighborhood (for Table 5 only), and environmental barriers. This empirical approach is in line with previous research using the intersectionality framework to examine health disparities (Cummings and Jackson, 2008; Sen, 2009).

3. Results

3.1. Leisure-time physical activity

Table 2 shows the percentage of black women, black men, white women, and white men who are engaged in a little, moderate, or extreme levels of physical activity. Black women have the lowest level of physical activity. At 52.3 percent, black women are significantly more likely than black men and white men ($p < 0.05$) to engage in a little physical activity. Black women also have the highest percentage of physical inactivity (21%). Over 70% of black men report engaging in a moderate or extreme level of physical activity. Nearly 54% of white women report engaging in at least a moderate level of physical activity compared to slightly over 60% of white men. If I were only examining racial differences in physical activity, the low rate of physical activity for black women and the high rate of physical activity for black men would mute each other. By disaggregating race-gender groups, the vitality of the intersectionality framework is highlighted.

Table 2
Level of physical activity.

	Black women	Black men	White women	White men
Little (0–2 days per week)	52.3% ^{BM, WM}	28.2% ^{BW, WW}	46.2% ^{BM}	37.7% ^{BW}
Moderate (3–5 days per week)	35.9% ^{BM}	53.9% ^{BW}	43.1%	42.9%
Extreme (6–7 days per week)	11.8%	18.0%	10.8%	19.5%
Total	100.0%	100.0%	100.0%	100.0%

Notes: Superscripts show significant differences at the 0.05 level; BW=Black Women; BM=Black Men; WW=White Women; WM=White Men.

Table 3
Perceived racial composition of families in neighborhood.

	Black women		Black men		White women		White men	
Predominately Black	72	27.5% ^{WW, WM}	21	26.9% ^{WW, WM}	2	3.1% ^{BW, BM}	1	1.3% ^{BW, BM}
Racially Diverse	138	52.7%	43	55.1%	27	41.5%	33	42.9%
Predominately White	52	19.9% ^{WW, WM}	14	18.0% ^{WW, WM}	36	55.4% ^{BW, BM}	43	55.8% ^{BW, BM}
Total	N = 262	100.0%	N = 78	100.0%	N = 65	100.0%	N = 77	100.0%

Notes: Predominately Black is 70–100% Black; Racially Diverse is less than 70% Black and less than 70% White; Predominately White is 70–100% White; BW=Black Women; BM=Black Men; WW=White Women; WM=White Men; Superscripts show significant differences at the 0.05 level.

Table 4
Perceptions of neighborhood resources^a by perceived racial composition; mean (S.D.).^b

	Black women	Black men	White women	White men	Total
Predominately Black ^c					
Lack of Safety	2.8 (1.6) ^{PW}	3.4 (2.1)	3.5 (2.1)	5 (–)	3.0 (1.8) ^{RD, PW}
Lack of Facilities	2.7 (1.6)	3.8 (1.8) ^{RD, PW}	3.5 (2.1)	6 (–)	3.0 (1.7) ^{PW}
Environmental Barriers ^d	2.5 (1.4)	3.4 (1.7)	3.5 (2.1)	3 (–)	2.7 (1.5) ^{PW}
Racially Diverse					
Lack of Safety	2.4 (1.6)	2.5 (1.5)	2.9 (1.5)	2.6 (1.4)	2.5 (1.5) ^{PB, PW}
Lack of Facilities	2.6 (1.6)	2.8 (1.6) ^{PB}	2.9 (1.5)	2.8 (1.4)	2.7 (1.6) ^{PW}
Environmental Barriers	2.4 (1.4)	2.6 (1.6)	2.6 (1.1)	2.7 (1.3)	2.5 (1.4) ^{PW}
Predominately White					
Lack of Safety	2.0 (1.3) ^{PB}	2.4 (1.5)	2.4 (1.5)	2.2 (1.3)	2.2 (1.4) ^{PB, RD}
Lack of Facilities	2.3 (1.5)	2.4 (1.2) ^{PB}	2.2 (1.5)	2.5 (1.4)	2.4 (1.4) ^{PB, RD}
Environmental Barriers	2.1 (1.2)	2.4 (1.3)	2.3 (1.3)	2.2 (1.4)	2.2 (1.3) ^{PB, RD}

Notes:

^a Range for all variables is 1 (strongly disagree) to 6 (strongly agree) that barriers are present.

^b Standard Deviations in parentheses.

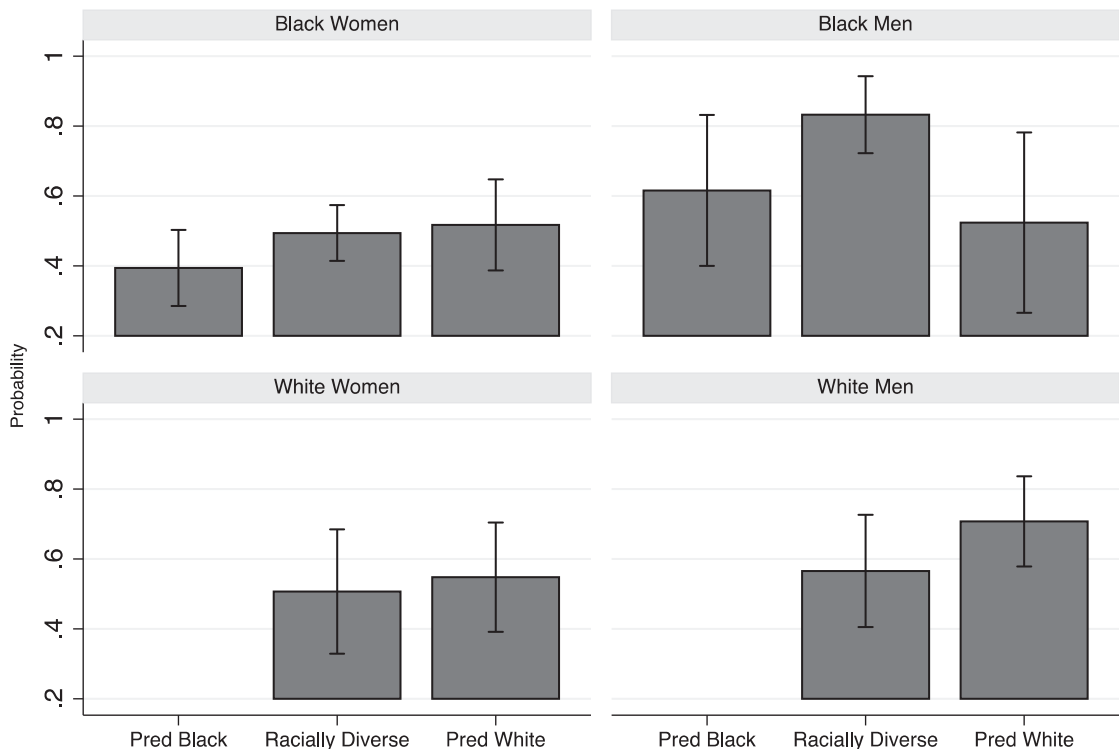
^c PB=Predominately Black; RD = Racially Diverse; PW=Predominately White; Superscripts show significant differences at 0.05 level within each race-gender group and for the total sample.

^d Environment barriers include a lack of facilities, safety, programs, costs, and transportation.

3.2. Perceived racial composition and neighborhood resources

Table 3 shows the perceived racial composition of families in respondents' neighborhoods. Over 50% of black respondents perceive living in neighborhoods that are racially diverse, which I classify as neighborhoods that are less than 70% white as well as less than 70% black. However, less than half of white respondents perceive living in racially diverse neighborhoods. A majority of white women and white men perceive living in neighborhoods that are predominately white. In fact, white women (55.4%) and white men (55.8%) are significantly more likely than black women (19.9%) and black men (18%) to perceive living in predominately white neighborhoods. Conversely, black women (27.5%) and black men (26.9%), compared to white women (3.1%) and white men (1.3%), are significantly more likely to perceive living in predominately black neighborhoods. Only three of the 142 white respondents (2%) report living in neighborhoods perceived to be at least 70% black.

Hypothesis 1 predicted that neighborhoods perceived as predominately black are simultaneously perceived as having fewer resources and being less safe than neighborhoods perceived as predominately white. Table 4 shows perceptions of neighborhood resources by perceived racial composition. Higher values represent fewer resources. Respondents who perceive living in predominately black neighborhoods report having significantly less safety, fewer facilities, and more environmental barriers than respondents who perceive living in predominately white neighborhoods. Respondents who perceive their neighborhoods as racially diverse also report having significantly fewer resources than respondents who perceive living in predominately white neighborhoods. Black women who perceive their neighborhoods as predominately black report significantly less safety than those who perceive living in white neighborhoods. Black men who perceive living in



These margin plots based on logistic regression models control for BMI, self-rated health, age, workhours, income, marital status, children in the home, urban, and environmental barriers.

Fig. 1. Margin plots of the predicted probabilities of perceived neighborhood composition on physical activity.

predominately black neighborhoods report having significantly fewer facilities compared to black men who perceive living in racially diverse or predominately white neighborhoods. Overall, hypothesis 1 is supported. It should be noted, however, that while there are significant relative differences across racial composition categories, respondents, on average, report living in neighborhoods that are safe with environmental resources.

3.3. Association between perceived racial composition and leisure-time physical activity

Fig. 1 shows margin plots with confidence intervals of the predicted probabilities of perceived neighborhood racial composition on physical activity for all four race-gender groups. Due to sample size limitations, white women and white men do not have a margin plot for predominately black neighborhoods. For black women, white women, and white men, the margin plots show that physical activity increases as the perception of one's neighborhood becomes increasingly white. For black men, however, they are most likely to engage in physical activity in neighborhoods perceived as racially diverse and less likely in neighborhoods perceived as predominately white. Despite black men reporting that neighborhoods perceived as predominately black have significantly fewer facilities for physical activity, they are still more likely to engage in physical activity in these types of neighborhoods than in neighborhoods perceived as predominately white, which are also perceived to have more facilities. Black women have the lowest level of physical activity in neighborhoods perceived as predominately black, which is lower than all race-gender groups in any type of neighborhood. This figure lends some credence to hypotheses 2 and 3, but the tables below provide further insight.

Table 5 shows logistic regression models of the association between perceived racial composition of neighborhoods and physical activity for black women, black men, white women, and white men. For black women, white women, and white men, the perceived racial composition of neighborhoods has a non-significant association with physical activity. For black men, however, Models 5 and 6 show that black men are significantly less likely to engage in physical activity in neighborhoods perceived as predominately white compared to neighborhoods perceived as racially diverse or predominately black. In fact, black men in neighborhoods perceived as predominately white, compared to black men in neighborhoods perceived as racially diverse, have a 85.4% lower odds of engaging in at least a moderate level of physical activity ($p < .05$). With additional controls, perceived racial composition has a non-significant association with physical activity for black men (Models 7 and 8). Nonetheless, similar to Fig. 1, these findings lend support for Hypothesis 2 that black men are less likely to engage in physical activity in neighborhoods perceived as predominately white. For all groups and across all models, self-rated health is

Table 5
Logistic regression models of the effect of the perceived racial composition of neighborhoods on physical activity.

	Black women (N = 262)				Black men (N = 78)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Neighborhood Perceived as Predominately White	0.000 (0.325)	-0.046 (0.332)	0.076 (0.345)	0.202 (0.354)	-1.925** (0.680)	-1.504* (0.757)	-1.322 (0.786)	-1.358 (0.824)
Neighborhood Perceived as Predominately Black	-0.336 (0.293)	-0.320 (0.298)	-0.348 (0.301)	-0.495 (0.318)	-0.944 ^{PW} (0.620)	-1.029 (0.733)	-0.822 (0.766)	-1.080 (0.822)
BMI		-0.042 (0.111)	-0.076 (0.113)	-0.105 (0.116)		-0.215 (0.286)	-0.251 (0.301)	-0.319 (0.326)
Self-rated Health		0.337* (0.159)	0.347* (0.160)	0.406* (0.165)		1.040** (0.400)	1.040* (0.421)	0.939* (0.456)
Age		0.246 (0.180)	0.324 (0.190)	0.344 (0.194)		-0.273 (0.429)	-0.392 (0.446)	-0.298 (0.462)
Married			-0.474 (0.318)	-0.511 (0.327)			-0.720 (0.896)	-0.832 (0.977)
Children Living in House			0.069 (0.144)	0.060 (0.145)			0.312 (0.376)	0.254 (0.419)
Household Income			-0.134 (0.197)	-0.047 (0.207)			0.851 (0.525)	0.958* (0.552)
Work Hours			-0.000 (0.011)	0.000 (0.011)			-0.001 (0.029)	-0.004 (0.030)
Southern Region				0.162 (0.271)				-0.128 (0.696)
Urban Neighborhood				0.434 (0.287)				0.289 (0.748)
Environmental Barriers				0.205* (0.101)				0.233 (0.229)
Constant	0.000 (0.170)	-1.495 (0.799)	-1.192 (0.918)	-2.206 (1.021)	1.638 (0.413)	-0.478 (1.893)	-1.688 (2.432)	-1.946 (2.605)
R-squared	0.004	0.027	0.038	0.057	0.094	0.246	0.282	0.297

	White women (n = 65)				White men (n = 77)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Neighborhood Perceived as Predominately White	-0.096 (0.501)	0.118 (0.602)	0.262 (0.646)	0.142 (0.729)	0.492 (0.475)	0.720 (0.543)	0.657 (0.559)	0.748 (0.602)
BMI		-0.608* (0.261)	-0.622* (0.266)	-0.637* (0.289)		-0.021 (0.235)	0.006 (0.245)	-0.006 (0.284)
Self-rated Health		0.614* (0.362)	0.865* (0.423)	1.168* (0.497)		0.745* (0.324)	0.711* (0.330)	0.760* (0.350)
Age		-0.088 (0.362)	-0.093 (0.410)	0.096 (0.478)		-1.037** (0.394)	-1.247** (0.461)	-1.415** (0.502)
Married			-1.077 (0.742)	-1.180 (0.796)			-0.346 (0.650)	-0.326 (0.664)
Children Living in House			0.379 (0.425)	0.586 (0.502)			-0.125 (0.384)	-0.285 (0.407)
Household Income			0.230 (0.543)	0.014 (0.614)			0.673 (0.503)	0.917 (0.561)
Work Hours			-0.046 (0.026)	-0.056 (0.030)			-0.039 (0.030)	-0.052* (0.031)
Southern Region				-1.995* (0.870)				0.003 (0.631)
Urban Neighborhood				0.146 (0.771)				1.302 (0.820)
Environmental Barriers				0.059 (0.313)				0.221 (0.252)
Constant	0.208 (0.373)	0.033 (1.761)	0.891 (2.160)	0.581 (2.953)	0.236 (0.345)	0.020 (1.558)	1.211 (1.979)	0.821 (2.061)
R-squared	0.000	0.185	0.251	0.326	0.011	0.163	0.191	0.238

Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05; PW=Significantly different at 0.05 level from predominately Black.
Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05.

significant and positive suggesting that physical activity increases as self-rated health improves. BMI is significant and negatively associated with physical activity for white women, while age is significant and negative for white men.

Table 6 shows logistic regression models for respondents in urban neighborhoods. Black women are significantly less likely to engage in physical activity in neighborhoods perceived as predominately black and urban compared to neighborhoods perceived as racially diverse and urban or predominately white and urban. Even after controlling for other factors, these relationships remain significant (Model 4). Black women in neighborhoods perceived as predominately black and

Table 6

Logistic regression models of the effect of perceived racial composition in urban neighborhoods on physical Activity.

	Black Women (N = 103)				Black Men (N = 34)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Neighborhood Perceived as Predominately White	1.296 ^{PB} (0.831)	1.357 ^{PB} (0.844)	1.513 ^{PB} (0.903)	1.560 ^{PB} (0.930)	-2.159 (1.382)	-1.622 (1.518)	-1.461 (1.734)	-1.531 (1.974)
Neighborhood Perceived as Predominately Black	-0.848* (0.429)	-0.836 (0.434)	-0.941* (0.455)	-1.085* (0.480)	-1.872 (1.173)	-1.663 (1.260)	-1.462 (1.505)	-1.129 (1.568)
BMI		-0.155 (0.191)	-0.211 (0.201)	-0.209 (0.212)		-0.242 (0.457)	-0.204 (0.459)	-0.814 (0.635)
Self-rated Health		-0.016 (0.283)	0.020 (0.298)	0.149 (0.312)		0.960 (0.710)	1.091 (0.769)	1.207 (0.911)
Age		0.296 (0.314)	0.544 (0.358)	0.521 (0.365)		0.867 (0.709)	0.856 (0.728)	2.017 (1.103)
Married			-0.005 (0.656)	-0.123 (0.676)			-0.567 (1.343)	-0.812 (2.027)
Children Living in House			0.066 (0.256)	0.070 (0.264)			-0.042 (0.624)	-0.925 (0.898)
Household Income			-0.558 (0.365)	-0.582 (0.382)			0.407 (0.993)	0.866 (1.149)
Work Hours			-0.006 (0.018)	-0.004 (0.018)			0.021 (0.059)	0.067 (0.079)
Southern Region				-0.213 (0.482)				1.000 (1.347)
Environmental Barriers				0.316 (0.164)				1.047* (0.571)
Constant	0.314 (0.302)	0.329 (1.425)	1.170 (1.590)	0.148 (1.731)	2.565 (1.038)	-1.790 (3.403)	-3.744 (4.621)	-9.596 (6.615)
R-squared	0.070	0.080	0.111	0.141	0.110	0.199	0.214	0.342
Whites (N = 41)		Model 1		Model 2		Model 3		Model 4
Neighborhood Perceived as Predominately White		-0.363 (0.691)		-0.004 (0.820)		0.237 (0.963)		0.393 (1.039)
White Women		-1.045 (0.718)		-0.926 (0.838)		-0.936 (0.948)		-0.875 (0.970)
BMI				-0.238 (0.331)		-0.553 (0.451)		-0.701 (0.538)
Self-rated Health				1.047* (0.504)		0.965 (0.537)		0.951 (0.542)
Age				-0.411 (0.534)		-0.391 (0.623)		-0.409 (0.643)
Married						0.820 (1.197)		0.944 (1.228)
Children Living in House						0.528 (0.756)		0.687 (0.831)
Household Income						-0.036 (0.793)		0.196 (0.857)
Work Hours						-0.032 (0.035)		-0.038 (0.037)
Southern Region								-0.487 (1.228)
Environmental Barriers								0.241 (0.389)
Constant		1.484 (0.728)		-0.572 (2.711)		1.302 (3.177)		0.848 (3.276)
R-Squared		0.045		0.249		0.299		0.308

Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05; PB=Significantly different at 0.05 level from predominately black.
 Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05.

urban, compared to black women in neighborhoods perceived as racially diverse and urban, have 66.2% lower odds of engaging in at least a moderate level of physical activity. Actually, black women in neighborhoods perceived as predominately white and urban, compared to black women in neighborhoods perceived as predominately black and urban, are 13.1 times more likely to engage in at least a moderate level of physical activity. For black men and whites, racial composition in urban neighborhoods has a non-significant association with physical activity. Altogether, these findings support Hypothesis 3, though with a caveat. Black women are less likely to engage in physical activity in neighborhoods perceived as predominately black that are also perceived as urban.

Table 7 displaying logistic regression models for respondents in suburban neighborhoods shows that black men in predominately white, suburban neighborhoods are significantly less likely to engage in physical activity than those in racially diverse, suburban neighborhoods and predominately black, suburban neighborhoods. These associations, however, become

Table 7
Logistic regression models of the effect of perceived racial composition in suburban neighborhoods on physical Activity.

	Black Women (N = 159)				Black Men (N = 44)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Neighborhood Perceived as Predominately White	-0.255 (0.384)	-0.321 (0.397)	-0.264 (0.409)	-0.175 (0.416)	-2.037* (0.843)	-1.079 (1.083)	-0.965 (1.361)	-0.314 (1.609)
Neighborhood Perceived as Predominately Black	0.151 (0.444)	0.087 (0.456)	0.080 (0.466)	0.042 (0.478)	-0.651 ^{PW} (0.980)	0.114 (1.352)	-0.454 (1.660)	-0.418 (1.739)
BMI		-0.027 (0.144)	-0.068 (0.147)	-0.072 (0.149)		-0.191 (0.436)	-0.253 (0.511)	-0.694 (0.722)
Self-rated Health		0.504* (0.201)	0.491* (0.204)	0.526* (0.208)		1.668* (0.734)	1.350 (0.809)	1.141 (0.903)
Age		0.300 (0.230)	0.361 (0.242)	0.376 (0.244)		-1.545* (0.755)	-2.093* (0.976)	-1.978 (1.117)
Married			-0.768* (0.399)	-0.844** (0.407)			-2.320 (2.082)	-3.108 (2.823)
Children Living in House			0.134 (0.186)	0.120 (0.186)			1.275* (0.695)	1.948* (1.129)
Household Income			0.129 (0.263)	0.222 (0.276)			1.946 (1.279)	1.946 (1.596)
Work Hours			0.014 (0.015)	0.012 (0.015)			0.006 (0.046)	-0.045 (0.064)
Southern Region				0.281 (0.362)				-2.579 (2.296)
Environmental Barriers				0.148 (0.141)				0.399 (0.426)
Constant	-0.151 (0.208)	-2.405 (1.026)	-2.986 (1.285)	-3.658 (1.409)	1.344 (0.458)	0.154 (3.281)	-1.284 (4.424)	3.612 (7.171)
R-squared	0.003	0.047	0.067	0.075	0.116	0.455	0.561	0.610

Whites (N = 101)	Model 1	Model 2	Model 3	Model 4
Neighborhood Perceived as Predominately White	0.405 (0.406)	0.737 (0.460)	0.691 (0.483)	0.867 (0.521)
White Women	-0.236 (0.409)	-0.337 (0.451)	-0.509 (0.500)	-0.725 (0.524)
BMI		-0.297 (0.203)	-0.207 (0.212)	-0.208 (0.227)
Self-rated Health		0.575* (0.275)	0.638* (0.294)	0.767* (0.314)
Age		-0.623* (0.300)	-0.787* (0.346)	-0.818* (0.356)
Married			-1.194* (0.551)	-1.418* (0.577)
Children Living in House			0.087 (0.305)	0.009 (0.321)
Household Income			0.621 (0.415)	0.583 (0.428)
Work Hours			-0.068* (0.028)	-0.077* (0.030)
Southern Region				-0.785 (0.538)
Environmental Barriers				0.313 (0.227)
Constant	0.091 (0.341)	0.294 (1.321)	2.615 (1.853)	2.447 (1.965)
R-squared	0.009	0.127	0.203	0.237

Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05; PW=Significantly different at 0.05 level from predominately Black.
Standard errors in parentheses; ***p < 0.001, **p < 0.01, *p < 0.05.

non-significant once including controls. Specifically, self-rated health and age in the model together mediate the relationship between physical activity and perceived racial composition for black men (Table 7, Model 6). For black women and whites living in suburban neighborhoods, marriage has a negative association with physical activity. Age has a negative association with physical activity for whites and black men. For whites, more work hours significantly decreases physical activity. Self-rated health continues to show positive and significant associations with physical activity for all groups.

4. Discussion and conclusion

This paper examined the association between the perceived racial composition of egocentric neighborhoods and leisure-time physical activity among middle class blacks and whites. My findings continue to show the relevancy of self-rated health

and BMI on physical activity. Self-rated health was the only variable showing significance for all race-gender groups. Supporting hypothesis 1, predominately black neighborhoods were perceived as having fewer neighborhood resources than neighborhoods perceived to be predominately white. Similar to previous research on racial segregation (Alba and Logan, 1993), I found that social class affluence does little to change the pattern that a majority of middle class blacks and whites live in racially segregated neighborhoods, which are at times distinctly different in terms of resources. Supporting hypotheses 2 and 3, I found that black men's level of physical activity significantly decreases in neighborhoods perceived to be predominately white whereas black women's physical activity significantly decreases in neighborhoods perceived to be predominately black and urban.

Although urban neighborhoods are often framed as less safe than suburban neighborhoods, my findings show that it is not just about urbanicity but also about blackness. Respondents were more likely to engage in physical activity in neighborhoods perceived to be urban areas. Black women, however, were significantly less likely to engage in physical activity in neighborhoods perceived as urban and black. Middle class black women who perceive living in predominately black and urban neighborhoods report significantly less safety. Based on racial segregation and the social organization of neighborhoods that blur the lines between middle class black and poor black neighborhoods (Pattillo-McCoy, 1999; Charles, 2003; Sharkey, 2014), neighborhoods with a higher perceived percentage of blacks are also often perceived as less safe. These findings support literature on the importance of neighborhood resources for shaping physical activity (Williams and Collins, 2001; Schulz et al., 2002; Bennett et al., 2006; Gordon-Larsen et al., 2006).

For women, however, safety as a barrier to physical activity may not only capture perceptions of being victims of crime but also gendered and sexualized vulnerabilities of trying to engage in physical activity in dense spaces where they may experience catcalling and the male gaze (Ray, 2014); or as bell hooks (1992) states, the ability for men to rape women with their eyes. This is not to say that this type of behavior and interaction between men and women does not occur in predominately white spaces. Evidence exists on the vulnerabilities of women in male-dominated spaces on predominately white campuses (Ray and Rosow, 2010; Armstrong and Hamilton, 2013). For physical activity, however, more well-resourced neighborhoods, which according to my findings are more likely to be perceived as predominately white, are more likely to have spaces where women can engage in physical activity without the purview of men. For example, fitness centers in more affluent neighborhoods are creating “women-only zones” where women can forgo male-dominated spaces (Ray, 2014). Some facilities, such as Curves Fitness, cater specifically to women. These types of businesses, however, may be less present in neighborhoods perceived as predominately black.

Black men have a different social reality from their black female counterparts. Supporting literature on criminalization (Feagin and Sikes, 1995; Houts Picca and Feagin, 2007; Feagin, 2010; Ray and Rosow, 2012), black men are significantly less likely to be physically active in neighborhoods perceived as predominately white. Although middle class black men may experience policing in predominately black neighborhoods, they may not feel or experience the safety and comfort of well-resourced, predominately white neighborhoods either. Experiencing discrimination or relative deprivation at a neighborhood business such as a restaurant or store may have a spillover effect to other spaces like gyms or parks, which may in turn, decrease physical activity and community engagement.

As a coping response to experiencing criminalization, middle class black men may undergo a signaling process where they feel the need to signal their middle class status in predominately white spaces. For example, Staples (1986) discussed how he would whistle melodies from classical composers while walking through Hyde Park to the University of Chicago in order to make whites feel less threatened by his presence. For middle class black men engaging in leisure-time physical activity, this signaling process may mean always carrying a driver's license or other form of identification, wearing an alumnus shirt of a notable university, walking along busy or well-lit streets, running during daylight hours, and smiling and waving at neighbors. Consequently, this signaling process may lead to less leisure-time physical activity for middle class black men in neighborhoods perceived to be predominately white.

Unlike black men, whites may not undertake (or feel the need to undertake) this signaling process when they simply want to run or walk a couple of miles around their neighborhood. Although facing their own stereotypes, black women are not criminalized as being violent predators to the same degree as black men (McConaughy and White, 2011). In turn, they are less threatening to the public, social order of predominately white neighborhoods.

The signaling process that middle class black men undergo has implications for self-presentation theory (Goffman, 1959). Middle class black men in neighborhoods perceived to be predominately white are aiming to present themselves as having earned the right to belong like their white male counterparts. Goffman (1959) states that the initial definition of the situation is determined by preconceived notions or inferences about the other in the social interaction. Middle class black men are well aware of the negative stereotypes about black men (Feagin and Sikes, 1995; Ray and Rosow, 2012). By aligning their self-presentations with the norms of predominately white neighborhoods, middle class black men are aiming to counter the negative inferences about their race-gender group (Staples, 1986; Ray and Rosow, 2012). Unfortunately, research shows that black men's social class cues are unable to substitute for the intersection of their black skin and maleness. As part of their self-presentation, middle class black men's intersectional identity is unable to overcome the main inference that provides relief from negative stereotyping and this signaling process—an ideal white racial identity (Hughey, 2012).

Conversely, neighborhoods perceived to be predominately black (even those perceived as having less safety and fewer facilities and programs focused on leisure-time physical activity) may allow black men to engage in the community without experiencing a heightened level of visibility and racial stereotyping. Given the high level of racial segregation in the United States, a majority of black males grow up in and around predominately black neighborhoods (Pattillo-McCoy, 1999). Unlike

predominately white neighborhoods where a black male face becomes a perceived threat to the social order (Feagin, 2010; Ray, 2015), predominately black neighborhoods provide black men a sense of belonging. In turn, they may increase their community engagement and leisure-time physical activity.

My research also has implications for scholars interested in intersectional identities (Cummings and Jackson, 2008; Wilkins, 2012; Bauer, 2014; Ray, 2014; Brown et al., 2016). Perceptions of race, gender, and social class identities guide individuals' interactions with others. Perceptions of the most salient feature(s) of an intersectional identity may be significant at determining social interactions and their consequences. Middle class black men perceive that the intersection of their race and gender identities frequently trumps their social class identity. The perceptions of others constrain black men's social world and influence black men's social interactions with co-workers and neighbors. As a result, these perceptions structure a unique form of relative deprivation that not only leads to less physical activity in neighborhoods perceived to be predominately white but also a different set of coping responses to unjust treatment, benign neglect, and perceived discrimination. In this regard, the intersectionality framework becomes useful for illuminating black men's multiplicities and vulnerabilities.

Although my research extends our understanding of how race-, gender-, and class-based perceptions influence leisure-time physical activity, I could not examine which types of physical activities respondents currently participate in. Existing research shows that blacks are more likely to engage in team sports (e.g., baseball, basketball, volleyball, soccer, and football), while whites are more likely to engage in fitness sports (e.g., walking, running, aerobics, stretching, weight lifting, cycling, and stair climbing) or facility sports (e.g., swimming, golf, and tennis) (Saint Onge and Krueger, 2011). My survey, however, did have data on which sports respondents participated in before age 18. Over 80% of black men and white men in my sample report playing sports as children. Black men were more likely to participate in basketball, track, and football, while white men were more likely to participate in baseball, golf, and soccer. However, a similar percentage of black and white men participated in biking, swimming, and tennis. The variety of sports that black men participated in, and might still engage in, may be related to the high level of education of the respondents' parents. Over 35% of the sample has parents with at least a college education with 56% of the black men's mothers having at least a college degree. Again, this is a middle class sample and the intergenerational transmission of educational capital may surface in cultural capital related to sports played in childhood and adulthood.

This study also could not examine the relationship between the racial composition and class composition of neighborhoods. Some might conjecture that the middle class blacks in the sample live in lower income neighborhoods so the findings may be a function of the social class of neighborhoods rather than the racial composition of neighborhoods. First, black respondents in this study have higher incomes than the white respondents. Second, even though a relative significant difference existed in perceptions of resources between neighborhoods perceived as predominately white and predominately black, both neighborhood types were perceived as pretty safe in absolute terms. This suggests that other factors—such as perceived racial composition—influence physical activity. Actually, black men in neighborhoods perceived as predominately black reported having the least amount of neighborhood resources yet they reported having relatively high levels of physical activity. This is why the intersectionality framework is vital. It allows researchers to examine the multiplicity of intersectional complexities to aggregate race, gender, and other proximal factors to illuminate their collective impact on a particular outcome.

Finally, this study could not examine objective indicators of neighborhoods. Similar to Duncan et al. (2014), future research should ascertain zip codes and closest cross streets from respondents to determine census tracts and other neighborhood metrics to more accurately assess structural indicators of neighborhoods. Moreover, scholars should continue to investigate the best model fit for conceptualizing neighborhoods as well as how individuals across social identities define their neighborhoods. What determines perceptual, egocentric, and structural boundaries of neighborhoods and how do individuals make sense of these boundaries given gentrification and urban and suburban sprawl? Researchers can then more accurately and systematically compare egocentric and objective indicators of neighborhoods and the impact they have on physical activity and other health disparities. Notwithstanding this limitation, similar to Duncan et al. (2014) and Sastry et al. (2002), I assert that egocentric indicators of neighborhoods are important. Despite objective racial composition, studies show that individuals overestimate the number of blacks in a particular setting. This overestimation is captured by neighborhood perceptions that become important for how social psychological processes influence health outcomes such as physical activity. Accordingly, a larger sample size may yield more robust associations attributable to neighborhood composition. Future research should explore these possibilities.

In conclusion, some middle class blacks may be limited to live in neighborhoods perceived to be either predominately white or predominately black. Consequently, the health of black men or black women (depending on where they live) may also be at risk. In an ideal neighborhood, LaVeist et al. (2011) argue that more racial integration is desirable to equalize health disparities. My findings on physical activity in racially diverse neighborhoods lend some credence to this. Nevertheless, less than one percent of U.S. census tracts have at least 35% of blacks and whites who also have similar levels of income and education (LaVeist et al., 2011). To overcome this challenge, researchers should continue to explore social environments that are comfortable to blacks and operate as intervention sites that may lead to more physical activity regardless of the racial composition of a neighborhood. Existing research suggest that worship sites, hair salons, and barbershops can serve as catalysts for physical activity and health-related behaviors among blacks (Young and Stewart, 2006; American Association of Retired Persons, 2009; Thompson, 2010). These environments are comfortable as pastors, hair stylists, and barbers serve as community trustees (Ray, 2014; Sewell and Ray, 2015). Exercise groups can be formed in these settings to decrease how social environments are racialized and gendered.

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References

- Alba, Richard D., Logan, John R., 1993. Minority proximity to whites in suburbs: an individual analysis of segregation. *Am. J. Sociol.* 98 (6), 1388–1427.
- American Association of Retired Persons, 2009. African American Women's Hair Issues and Engagement in Physical Activity (Executive Summary).
- Armstrong, Elizabeth A., Hamilton, Laura T., 2013. *Paying for the Party: How College Maintains Inequality*. Harvard University Press, Boston.
- Auchincloss, A.H., Diez Roux, A.V., Mujahid, M.S., Shen, M., Bertoni, A.G., Carnethon, M.R., 2009. Neighborhood resources for physical activity and healthy foods and incidence of type 2 diabetes (the Multi-Ethnic Study of Atherosclerosis). *Arch. Int. Med.* 129 (18), 1698–1704.
- Banks, Ralph Richard, 2011. *Is Marriage for White People? How the African American Marriage Decline Affects Everyone* (New York: Penguin).
- Bauer, Greta R., 2014. Incorporating intersectionality theory into population health research methodology: challenges and the potential to advance health equity. *Soc. Sci. Med.* 110, 10–17.
- Bennett, Gary G., Wolin, Kathleen Y., Puleo, Elaine., Emmons, Karen M., 2006. Pedometer-determined physical activity among multiethnic low-income housing residents. *Med. Sci. Sports Exerc.* 38, 768–773.
- Bennett, Gary G., McNeil, Lorna H., Wolin, Kathleen Y., Duncan, Dustin T., Puleo, Elaine, Emmons, Karen M., 2007. Safe to Walk? Neighborhood safety and physical activity among public housing residents. *PLoS Med.* 4, 1599–1607.
- Berinsky, Adam J., Huber, Gregory A., Lenz, Gabriel S., 2010. Using Mechanical Turk as a Subject Recruitment Tool for Experimental Research (Unpublished paper).
- Brown, Tyson H., Richardson, Liana J., Hargrove, Taylor W., Thomas, Courtney S., 2016. Using Multiple-hierarchy Stratification and Life Course Approaches to Understand Health Inequalities: the Intersecting Consequences of.
- Camacho, Terry C., Roberts, Robert E., Lazarus, Nancy B., Kaplan, George A., Cohen, Richard D., 1991. Physical activity and depression: evidence from the alameda county study. *Am. J. Epidemiol.* 134, 220–231.
- Canadian Fitness and Lifestyle Research Institute, 1996. Patterns of physical activity. *Prog. Prev. Bulletin* no. 2.
- Charles, Camille Z., 2003. The dynamics of racial residential segregation. *Annu. Rev. Sociol.* 29, 167–207.
- Charles, Zubrinsky, Camille, 2006. *Won't You Be My Neighbor? Race, Class and Residence in Los Angeles*. Russell Sage, New York.
- Chinn, David J., White, Martin, Harland, Jane, Drinkwater, Christopher, Raybould, Simon, 1999. Barriers to physical activity and socioeconomic position: implications for health promotion. *J. Epidemiol. Community Health* 53, 191–192.
- Choo, Hae Yeon, Ferree, Myra Marx, 2010. Practicing intersectionality in sociological research: a critical analysis of inclusions, interactions, and institutions in the study of inequalities. *Sociol. Theory* 28 (2), 129–149.
- Coogan, Patricia F., Laura, F. White, Stephen, R. Evans, Thomas, J. Adler, Kevin, M. Hathaway, Julie, R. Palmer, Rosenberg, Lynn, 2011. Longitudinal assessment of urban form and weight gain in african-american women. *Am. J. Prev. Med.* 40 (4), 411–418.
- Correll, Joshua, Urland, Geoffrey R., Ito, Tiffany A., 2006. Event-related potentials and the decision to shoot: the role of threat perception and cognitive control. *J. Exp. Soc. Psychol.* 42, 120–128.
- Cummings, Jason L., Jackson, Pamela B., 2008. Race, gender, and SES Disparities in self-assessed health, 1974–2004. *Res. Aging* 30 (2), 137–168.
- Duncan, Dustin T., et al., 2014. Practice of epidemiology examination of how neighborhood definition influences measurements of youths' access to tobacco retailers. *A Methodol. Note Spatial Misclassification* 179 (3), 373–381.
- Eberhardt, Jennifer L., Goff, Phillip A., Purdie, Valerie J., Davies, Paul G., 2004. "Seeing black: race, crime, and visual processing." *J. Personality Soc. Psychol.* 87 (6), 876–893.
- Feagin, Joe R., 2010. *Racist America: Roots, Current Realities, and Future Reparations*, second ed. Taylor & Francis Group, New York.
- Feagin, Joe R., Sikes, Melvin P., 1995. How black students cope with racism on white campuses. *J. Blacks High. Educ.* 8, 91–97.
- Few, April L., Stephens, Dionne P., Rouse-Arnett, Marlo, 2003. Sister-to-Sister talk: transcending boundaries and challenges in qualitative research with black women. *Fam. Relat.* 52 (3), 205–215.
- Gilbert, Keon, Ray, Rashawn, 2016. Why police kill black males with impunity: applying critical race and public health theory to address determinants of policing behaviors and the justifiable homicides of black men. *J. Urban Health* 93 (1), 122–140.
- Gilbert, Keon, Ray, Rashawn, Siddiqi, Arjumand, Griffith, Derek, Baker, Elizabeth, Shetty, Shivan, Elder, Keith, 2016. Visible and invisible trends in african american Men's health: pitfalls and promises. *Annu. Rev. Public Health* 37, 295–311.
- Goffman, Erving, 1959. *The Presentation of Self in Everyday Life*. Doubleday, New York.
- Gordon-Larsen, Penny, Nelson, Melissa C., Page, Phil, Popkin, Barry M., 2006. Inequality in the built environment underlies key health disparities in physical activity and obesity. *Pediatrics* 117, 417–425.
- Hooks, Bell, 1992. *Black Looks: Race and Representation*. South End Press, Boston.
- Hout, Michael, 2008. How class works: objective and subjective aspects of class since the 1970s. In: Lareau, Annette, Conley, Dalton (Eds.), *Social Class: How Does it Work?* Russell Sage Foundation, New York, pp. 25–64.
- Hughey, Matthew W., 2012. Stigma allure and white antiracist identity management. *Soc. Psychol. Quart.* 75 (3), 219–241.
- Hunt, Matthew, Ray, Rashawn, 2012. Black Americans social class identifications: trends and determinants, 1974–2010. *Am. Behav. Sci.* 56, 1462–1480.
- Katzmarzyk, P.T., Lear, S.A., 2011. Physical activity for obese individuals: a systematic review of effects on chronic disease risk factors. *Obes. Rev.* 13 (2), 95–105.
- Laveist, Thomas A., Wallace Jr., John M., 2000. Health risk and inequitable distribution of liquor stores in african american neighborhoods. *Soc. Sci. Med.* 51, 613–617.
- LaVeist, Thomas, Pollack, Keshia, Thorpe Jr., Roland, Fesahazion, Ruth, Gaskin, Darrell, 2011. Place, not race: disparities dissipate in southwest baltimore when blacks and whites live under similar conditions. *Health Aff.* 30, 1880–1887.
- Lê-Scherban, F., Albrecht, S.S., Osypuk, T.L., Sanchez, B.N., Diez Roux, A.V., 2014. Neighborhood ethnic composition, spatial assimilation, and change in body mass index over time among hispanic and Chinese immigrants: multi-ethnic study of atherosclerosis. *Am. J. Public Health* 104 (11), 2138–2146.
- Lee, I-Min, Shiroma, Eric J., Felipe, Lobelo, Pekka, Puska, Blair, Steven N., Katzmarzyk, Peter T., 2012. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 380 (9838), 219–229.
- Logan, John R., Alba, Richard D., Shu-Yin, Leung, 1996. Minority access to white suburbs: a multiregional comparison. *Soc. Forces* 74 (3), 851–888.
- Long, J. Scott, 1997. *Regression Models for Categorical and Limited Dependent Variables*. SAGE Publications, Inc, Thousand Oaks, CA.
- López, Nancy, 2013. Contextualizing lived race-gender & the racialized-gendered social determinants of health. In: Gómez, Laura, López, Nancy (Eds.), *Mapping "Race": Critical Approaches to Health Disparities Research*. Rutgers University Press, New Brunswick, NJ.

- Oka, Masayoshi, Link, Carol L., Kawachi, Ichiro, 2011. Disparities in the prevalence of obesity in boston: results from the boston area community health (BACH) survey. *Public Health Rep.* 126 (5), 700–707.
- Massey, Douglas S., Denton, Nancy A., 1993. *American Apartheid: Segregation and the Making of the Underclass*. Harvard University Press, Cambridge.
- McCall, L., 2005. The complexity of intersectionality. *Signs J. Women Cult. Soc.* 30 (3), 1771–1800.
- McConaughy, Corrine M., White, Ismail K., 2011. Racial politics complicated: the work of gendered race cues in american politics. *New Res. Gen. Political Psychol. Conf.* http://politicalscience.osu.edu/faculty/iwhite/mcconnaughy_white.pdf.
- Mendes, Elizabeth, 2009. In the U.S., nearly half exercise less than three days a week. Gallup Wellbeing.
- National Center for Health Statistics, 2010. *Health, United States, 2010: with Special Feature on Death and Dying*. Hyattsville, MD, 2011.
- Noy, Shiri, Ray, Rashawn, 2012. Graduate students' perceptions of their advisors: is there systematic disadvantage in mentorship? *J. High. Edu.* 83 (6), 876–914.
- Saint Onge, Jarron M., Krueger, Patrick M., 2011. Education and racial-ethnic differences in the United States. *J. Health Soc. Behav.* 52 (2), 197–211.
- O'Dea, Jennifer A., 2003. Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. *J. Am. Dietetic Assoc.* 103, 497–501.
- Papas, Mia A., Alberg, Anthony J., Ewing, Reid, Helzlsouer, Kathy J., Gary, Tiffany L., Klassen, Ann C., 2007. The built environment and obesity. *Epidemiol. Rev.* 29, 129–143.
- Pattillo-McCoy, Mary, 1999. *Black Picket Fences: Privilege and Peril Among the Black Middle Class*. University of Chicago Press, Chicago.
- Houts Picca, Leslie, Feagin, Joe R., 2007. *Two-faced Racism: Whites in the Backstage and Frontstage*. Routledge, New York.
- Powell, Brian, Bolzendahl, Catherine, Geist, Claudia, Steelman, Lala Carr, 2010. *Counted Out: Same-sex Relations and Americans' Definitions of Family*. American Sociological Association Rose Series. Russell Sage Foundation, New York.
- Rattan, Aneeta, Levine, Cynthia S., Dweck, Carol S., Eberhardt, Jennifer L., 2012. Race and the fragility of the legal distinction between juveniles and adults. *PLoS One* 7, e36680.
- Ray, Rashawn, 2013. Fraternity life at predominately white universities in the U.S.: the saliency of race. *Ethn. Racial Stud.* 36, 320–336.
- Ray, Rashawn, 2014. An intersectional analysis to explaining a lack of physical activity among middle class black women. *Sociol. Compass* 8 (6), 780–791.
- Ray, Rashawn, 2015. If only He Didn't wear the hoodie... selective perception and stereotype maintenance. In: McClure, Stephanie, Harris, Cherise (Eds.), *Getting Real about Race: Hoodies, Mascots, Model Minorities, and Other Conversations*. Sage, Los Angeles, pp. 81–93.
- Ray, Rashawn, Rosow, Jason, 2010. Getting off and getting intimate: how normative institutional arrangements structure black and white fraternity Men's approaches towards women. *Men Masculinities* 12, 523–546.
- Ray, Rashawn, Rosow, Jason A., 2012. Two different worlds of black and white fraternity men: visibility and accountability as mechanisms of privilege. *J. Contemp. Ethnogr.* 41 (1), 66–95.
- Robert, Jennifer Denise, Knight, Brandon, Ray, Rashawn, Saelens, Brian E., 2016. Parental perceived built environment measures and active play in Washington DC metropolitan children. *Prev. Med. Rep.* 3, 373–378.
- Sastry, Narayan, Pebley, Anne R., Zonta, Michela, 2002. Neighborhood definitions and the spatial dimension of daily life in Los Angeles. *RAND Labor Popul. Program Work. Pap. Ser.* (03–02) 1–34.
- Schulz, Amy J., Williams, David R., Israel, Barbara A., Lempert, Lora Bex, 2002. Racial and spatial relations as fundamental determinants of health in detroit. *Milbank Q.* 80 (4), 677–707.
- Semyonov, Moshe, 2012. Neighborhood Ethn. Compos. Resid. Perceptions Saf. Eur. Ctries. 59 (1), 117–135.
- Sen, Gita, Aditi, Iyer, Chandan Mukherjee, 2009. A methodology to analyse the intersections of social inequalities in health. *J. Hum. Dev. Capab.* 10 (3), 397–415.
- Sewell, Abigail, Ray, Rashawn, 2015. A place to trust: black protestant affiliation and trust in personal physicians. *Res. Sociol. Health Care* 33.
- Sharkey, Patrick, 2014. Spatial segmentation and the black middle class. *Am. J. Sociol.* 119 (4), 903–954.
- Spielman, Seth E., Yoo, Eun-hye, 2009. Social science & medicine the spatial dimensions of neighborhood effects. *Soc. Sci. Med.* 68 (6), 1098–1105.
- Staples, Brent, 1986. Just walk on by: a black man ponders his power to alter public space. *Ms. Mag.* July 54–56.
- Stensvold, Dorte, Javaid, Nauman, Nilsen, Tom I.L., Wisloff, Ulrik, Slordahl, Stig A., Vatten, Lars, 2011. Even low level of physical activity is associated with reduced mortality among People with metabolic syndrome, a population based study (the HUNT 2 study, Norway). *BMC Med.* 9, 109.
- Thomas, Courtney S., Thomas, Courtney S., 2015. A new look at the black middle Class: research trends and challenges a new look at the black middle class: research trends and challenges. *Sociol. Focus* 48, 191–207.
- Thompson, Wanda M., 2010. *A Church-based Intervention to Promote Physical Activity in Black Adolescent Girls* (Doctoral dissertation).
- Trawalter, Sophie, Andrew, R. Todd, Abigail, A. Baird, Jennifer, A. Richeson, 2008. Attending to threat: race-based patterns of selective attention. *J. Exp. Soc. Psychol.* 44, 1322–1327.
- Tudor-Locke, Catrine, Bassett Jr., David R., 2004. How many steps/day are enough? preliminary pedometer indices for public health. *Sports Med.* 34, 1–8.
- U.S. Census Bureau, 2010. *American Community Survey*.
- U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2008b. *Physical Activity Guidelines for Americans*. HHS, Washington.
- U.S. Department of Health and Human Services Centers for Disease Control, 2009. *2009 national healthcare quality & disparities reports. Table 9_1_2.1. Natl. Health Nutr. Exam. Surv.* Retrieved http://www.ahrq.gov/legacy/qual/qrd09/9_lifestyle_modification/T9_1_2-1.htm.
- Wilkins, Amy C., 2012. Becoming black women: intimate stories and intersectional identities. *Soc. Psychol. Q.* 75 (2), 173–196.
- Williams, David R., Collins, Chiquita, 2001. Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Rep.* 116, 404–416.
- Young, Deborah Rohm, Stewart, Kerry J., 2006. A church-based physical activity intervention for african american women. *Fam. Community Health* 29, 103–117.