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The Role of Marital Status in Physical Activity Among African American and White Men

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Abstract

Racial differences in physical activity among men are well documented; however, little is known about the impact of marital status on this relationship. Data from the National Health and Examination Survey (NHANES) 1999–2006 was used to determine whether the association of race and physical activity among men varied by marital status. Marital status was divided into two categories: married and unmarried. Physical activity was determined by the number of minutes per week a respondent engaged in household/yard work, moderate and vigorous activity, or transportation (bicycling and walking) over the past 30 days. The sample included 7,131 African American (29%) and White(71%) men aged 18 years and older. All models were estimated using logistic regression. Because the interaction term of race and marital status was statistically significant ($p < .001$), the relationship between race, physical activity, and marital status was examined using a variable that reflects the different levels of the interaction term. After adjusting for age, income, education, weight status, smoking status, and self-rated health, African American married men had lower odds (odds ratio = 0.53, 95% confidence interval = [0.46–0.61], $p < .001$) of meeting federal physical activity guidelines compared with White married men. Possible dissimilarities in financial and social responsibilities may contribute to the racial differences observed in physical activity among African American and White married men.

Keywords

race; men's health; men; physical activity; disparities; marriage

Introduction

Physical activity is a major modifiable health behavior that plays an important role in chronic disease morbidity and mortality. Studies report risk for chronic diseases associated with physical inactivity increases with age (Centers for Disease Control and Prevention

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[CDC], 2007 Centers for Disease Control and Prevention [CDC], 2014 ; U.S. Department of Health and Human Services [HHS], 2008). Although the majority of deaths across racial/ethnic groups are due to chronic diseases, death rates vary substantially between racial/ethnic groups, with African American men and women having substantially higher age-adjusted death rates from chronic conditions as compared with White men and women (Cohen, Bulatao, & Anderson, 2004). Regular participation in physical activity has many health benefits including reducing the risk of chronic conditions such as cardiovascular disease, type 2 diabetes, and certain cancers, all of which disproportionately affect African Americans (CDC, 2014; HHS, 2008; Satcher, Lee, & Joyner, 1999). Engaging in regular physical activity is also related to increased longevity (CDC, 2014).

While men tend to engage in more physical activity than women (Kruger, Kohl, & Miles, 2007), only half of African American men report engaging in vigorous leisure-time physical activity (Ball, Jeffery, Abbott, McNaughton, & Crawford, 2010). Furthermore, African American men have a lower prevalence of physical activity compared with White men, which has been reported to contribute to poor health outcomes (Marshall et al., 2007). Given the excess burden of preventable chronic diseases and premature death among African American men (Thorpe, Richard, Bowie, LaVeist, & Gaskin 2013b; Thorpe, Wilson-Frederick, et al., 2013; Warner & Hayward, 2006), increasing participation in physical activity among these men may be an important intervention to improve their health and longevity.

Studies seeking to understand racial differences in physical activity have examined the effects of social factors, such as education and income, and concluded racial minorities with low education and income levels were less likely to engage in regular physical activity (Crespo, Smit, Andersen, Carter-Pokras, & Ainsworth, 2000; Griffith, Gunter, & Allen, 2011; He & Baker, 2005; Marshall et al., 2007). On the other hand, research has identified persistent race disparities in participation in physical activity even after adjusting for income and education (CDC, 2007; Crespo et al., 2000; Marshall et al., 2007). Studies have also examined other the social factors, such as occupation and poverty status, which considered family size, annual household income, and regional differences (Crespo et al., 2000; Marshall et al., 2007). Based on occupation, African American men and Mexican American men in blue-collar or white-collar professions had a higher prevalence of physical inactivity compared with White men in similar professions (Crespo et al., 2000). Furthermore, there was a higher prevalence of physical inactivity among African American men and Mexican American men who were living below the poverty line relative to White men (Crespo et al., 2000). However, less is known about how other social factors, such as marriage, might affect the relationship between race and physical activity among men.

Marriage is a common social relationship that influences health outcomes and health behaviors (Robles & Kiecolt-Glaser, 2003). Previous work has suggested that the effect of marriage on health may differ between African American and White married men (Harris, Lee, & DeLeone, 2010). African American men have reported lower marital quality than White men, which may adversely affect their health by increasing negative health-related behaviors and promoting stress-related immune system suppression (Robles & Kiecolt-Glaser, 2003). Some literature has suggested that compared with Whites, marriage provides

very little health-related protective effects for African Americans (Harris et al., 2010). Social support is one mechanism that is associated with producing the protective effects of marriage (Tucker & Mueller, 2000; Umberson, 1992; Cohen & Syme, 1985). It is posited that social support produces the health benefits associated with marriage by reducing the occurrence of negative health-related behaviors and increasing the occurrence of positive health-related behaviors (Umberson, 1992; Cohen & Syme, 1985). However, previous work has reported African American couples are less likely to report receiving adequate social support from their spouse (Broman, 2005).

Although marriage is generally associated with the promotion of positive behaviors, according to Nomaguchi and Bianchi (2004), married men are reported to exercise 2 hours and 50 minutes less every 2 weeks compared with unmarried men. The financial and familial responsibilities associated with marriage could provide one explanation for the differences in physical activity levels between married and unmarried men. Prior work discusses how as financial and familial responsibilities increase, the priority of physical activity decreases (Griffith et al., 2011). In addition, the increase in responsibilities associated with marriage may vary between African American and White men, which could provide an explanation for differing physical activity levels (Griffith et al., 2011). For example, African American men in two-parent families are more involved in child rearing compared with men of other racial and ethnic groups (Hossain & Roopnarine, 1993). In addition, evidence suggests that African American men prioritize their roles as providers, fathers, spouses, and community members over engaging in physical activity, which presents a major obstacle to increasing their participation in physical activity (Griffith et al., 2011).

The present study sought to examine the association between race and physical activity in non-Hispanic Black and White men (referenced as African American and White) aged 18 years and older and the degree to which this relationship varies by marital status. It is hypothesized that married African American men will be less likely than married White men to meet the federal guidelines for physical activity.

Method

Study Population

The National Health and Nutrition Examination Survey (NHANES) was developed to determine the nutritional and health status of noninstitutionalized, civilian U.S. populations. NHANES compiles information from a nationally representative sample of adults and children through interviews and physical examinations, which includes laboratory tests and medical, dental, and physiological measurements (CDC, 2005). Data were collected in two stages. First, the interview component consisted of demographic, dietary, and health status information (CDC, 2005). At the end of the interview, participants were invited to participate in a physical examination. Interviews were conducted in the respondents' home and examinations were performed in mobile centers (CDC, 2005). In this study, NHANES data from 1999 to 2006 were combined to obtain a sufficient amount of African American men. Thus, the final sample included 7,131 African American (29%) and White (71%) men aged 18 years and older with complete data on marital status.

Measures

Minutes per week engaging in physical activity was based on three domains: household/yard activities, leisure activities (moderate or vigorous), and transportation (bicycling and walking). Participants were asked over the past 30 days whether they engaged in any household/yard work, moderate and vigorous activity, or transportation. If the participant answered "yes" for any item, additional questions were asked to describe the type of activity, intensity, number of times performed over past 30 days, and number of minutes the activity was performed. Variables were created to identify the number of minutes per week for each domain. The physical activity guidelines' minutes per week were derived by multiplying the vigorous leisure time minutes by two and summing across the household/yard, moderate leisure time activities, and transportation activities per week (HHS, 2008). A binary variable was created to identify those who met the federal guidelines of at least 150 minutes per week versus those who did not meet these guidelines (HHS, 2008).

Race was determined by those who self-identified as non-Hispanic White or non-Hispanic Black, with non-Hispanic White men as the reference group. Marital status was divided into two categories: married, which included, currently married and living as married, and unmarried, which included never married, divorced or separated, and widowed. Currently married men were the reference group.

Covariates

Covariates consisted of age, education, income, self-rated health, smoking, and weight status. Age was measured as a continuous variable. Education was determined by the respondent's identification with one of four levels: less than 12th grade, high school graduation or GED, some college or associates degree, and college degree or above. Income was divided into three categories: less than $35,000; $35,000 to $75,000; and greater than $75,000. Respondents rated their health as excellent, very good, good, fair, or poor. A dichotomous variable was created to classify men who reported excellent, very good, and good health versus those who reported fair or poor health. Respondents who smoked every day or some days and those who smoked 100 cigarettes in their lifetime were classified as a smoker, but those who no longer smoked were classified as a former smoker. Body mass index (BMI) was based on self-reported weight and height and calculated as weight (kilograms)/height (meters)^2. A variable was created to identify the men's weight status and categorized as normal, overweight, or obese (CDC, 2014; Stommel & Schoenborn, 2009).

Analysis

Proportional and mean differences between the racial categories and demographic and health-related factors were determined by chi-square test and Student's *t* test, respectively. Multiple logistic regression models were used to evaluate the interrelationship between race, physical activity, marital status, and the covariates. Because the interaction term of race and marital status was statistically significant ($p < .001$), the relationship between race, physical activity, and marital status was examined using a variable that reflects the different levels of the interaction term (Gaskin et al., 2014). This variable consists of the following categories: White married men, White unmarried men, African American married men, and African American unmarried men. Three progressively more complex models were estimated.

Model 1 evaluated the relationship between race, marital status, and physical activity. Model 2 added demographic factors, and Model 3 added health-related factors. Taylor linearization procedures were used to account for the complex sampling design of NHANES. Results with a *p* value less than.05 were considered statistically significant. Statistical procedures were conducted using STATA 11 software (StataCorp, 2009).

Results

The distribution of select characteristics is reported in Table 1. Compared with White men, African American men, on average, were younger by approximately 14 years. For the distribution of the marital status levels, African American men were more likely to be never married and less likely to be married compared with White men. With regard to socioeconomic status indicators, African American men were more likely to earn less than $35,000 and more likely to have a 12th grade or lower education compared with White men. For health-related characteristics, African American men were more likely to be obese, have never smoked, and rate their health as fair/poor. African American men were also less likely to be physically active compared with White men.

The association of physical activity with race and marital status is presented in Table 2. Model 1 tested the association between physical activity with race and marital status. African American married men (odds ratio [OR] = 0.47, 95% confidence interval [CI] = [0.41, 0.54], $p < .001$) and African American unmarried men (OR = 0.41, 95% CI = [0.36, 0.47], $p < .001$) had lower odds of meeting federal guidelines for physical activity than White married men. Accounting for age, income, and education in Model 2, African American married men (OR = 0.52, 95% CI = [0.46, 0.60], $p < .001$) and African American unmarried men (OR = 0.55, 95% CI = [0.48, 0.63], $p < .001$) still had lower odds of meeting federal physical activity guidelines than White married men. After including the health-related factors in Model 3, African American married men (OR = 0.53, 95% CI = [0.46, 0.61], $p < .001$) and African American unmarried men (OR = 0.58, 95% CI = [0.50, 0.68], $p < .001$) continued to have a lower odds of meeting federal physical activity guidelines relative to White married men.

Discussion

Physical activity, or the lack thereof, is relevant because of its contribution to many chronic conditions that can lead to premature death and disability (CDC, 2014; HHS 2008; Satcher et al., 1999). Physical activity must be examined in light of one's context, as engaging in physical activity is influenced not only by individual choice but also by interpersonal, community, and environmental factors (Riley, Mark, Kristjansson, Sawada, & Reid, 2013). Marriage, as an important interpersonal relationship, may influence the association between race and physical activity, yet this relationship is not well understood (Marshall et al., 2007). The objective of this study was to examine the interrelationship between race, physical activity, and marital status in African American and White men using 1999 to 2006 NHANES data. Findings indicate African American married men have lower odds of meeting federal physical activity guidelines as compared with White married men. Other

social factors beyond marital status may be more important to African American men in their ability to meet the federal physical activity guidelines.

The lower odds of meeting federal physical activity guidelines among African American married men compared with White married men supports the hypothesis that racial differences in physical activity levels exist when examined by marital status. One study that explored leisure time physical activity suggested that regardless of marital status, White men had lower prevalence of physical inactivity than African American men (Crespo et al., 2000). These results suggest that certain aspects of marriage may be dissimilar between African American and White men, which affect physical activity levels. Racial differences in the financial and social responsibilities associated with marriage could provide one explanation. Generally, African American men are more likely to have a lower education and income when compared with White men (Griffith et al., 2011; Williams, 2003). Another explanation for these findings could be the racial differences in age between African American and White men. In our sample, African Americans were on average 14 years younger than White men. These socioeconomic characteristics combined with added financial and social responsibilities, such as work, family, and community commitments, may make it difficult for African American men to participate in physical activity (Griffith et al., 2011). In addition, social and cultural norms among African American men may prioritize fulfilling their head of household role as provider over engaging in health-promoting behaviors, which may lead to stress and poor health outcomes (Griffith et al., 2011; Hooker, Wilcox, Burroughs, Rheaume, & Courtenay, 2012). These findings underscore the importance of helping African American men to meet the federal physical activity guidelines.

Based on these findings and the work of other investigators, it is worthwhile noting some possible individual and community/structural-level strategies to encourage physical activity for African American men. Main et al. (2009) reported that barbershops within African American communities were effective places to educate African American men of their cardiovascular disease risk factors, such as an increase in physical activity. Also, research has reported that a supportive built environment may facilitate one’s ability to achieve recommended levels of physical activity (Giles-Corti & Donovan, 2002; Mozaffarian et al., 2012). However, there is substantial racial segregation that exists in the United States that may affect the built environment of many African American men (Griffith, Schulz, Johnson, & Herbert, 2010; Thorpe et al., 2008; Thorpe et al., 2013c; Thorpe et al., 2015). For instance, compared with White men, African American men are more likely to live in neighborhoods with more constrained access to resources in their built environments that promote physical activity (Marshall et al., 2007; Taylor, Poston, Jones, & Kraft, 2006; Wilson, Kirtland, Ainsworth, & Addy, 2004). Future research should consider including a multilevel approach when developing strategies and interventions to increase physical activity particularly among African American men.

There are limitations associated with this study. First, there may be discrepancies in the levels of physical activity reported. Some biases may be due to the prevalence of physical activity being based on the participant’s response, which may not be accurately reported. Although past studies consider self-report of health behaviors including physical activity

valid, under- or overreporting could affect the estimation of physical activity levels (Marshall et al., 2007; Sallis & Saelens, 2000). Second, current items used to assess meeting federal guidelines for physical activity do not include some activities such as physically strenuous jobs or work-related physical activity, which may contribute to lower reports of physical activity for African American men working in blue-collar occupations (Caban-Martinez et al., 2007; He & Baker, 2005; HHS, 2008; Marshall et al., 2007; CDC, 2000). The results of one study suggest that among men in blue-collar occupations, African American men engage in less leisure time physical activity than do White men, and if blue-collar workers engage in more occupational physical activity, results would have more likely reported reductions in leisure time inactivity across all racial and ethnic groups (Crespo et al., 2000). Third, this is cross-sectional data, which precludes our ability to infer causality.

Despite these limitations, this study has several strengths. This study considers one of the major social relationships and its effects on racial differences in physical activity, known to be a major risk factor for diseases affecting men's health (Griffith et al., 2011; Griffith & Thorpe, 2016; Thorpe et al., 2013a). Furthermore, the data from this study included a nationally representative sample of African American and White men in the United States (CDC, 2005). On reviewing the literature no study was found that examined race, marital status, and physical activity among men that uses federal physical activity guidelines.

Overall, this study provides evidence that marriage is associated with lower levels of physical activity for African American men compared with White men. Understanding how responsibilities associated with marriage may contribute to differences in health behaviors could help develop strategies to increase physical activity levels among African American men. Future studies ought to ask African American men what would help them increase their physical activity levels and whether they would participate if presented with these opportunities (Griffith et al., 2011; Marshall et al., 2007).

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References

Ball K, Jeffery R, Abbott G, McNaughton S, Crawford D. Is healthy behavior contagious: Associations of social norms with physical activity and healthy eating. International Journal of Behavioral Nutrition and Physical Activity. 2010; 7(86):1–9. [PubMed: 20145731]

Broman C. Marital quality in Black and White marriages. Journal of Family Issues. 2005; 26:431–441.

Caban-Martinez A, Lee D, Fleming L, LeBlanc W, Arheart K, Chung-Bridges K, Pitman T. Leisure-time physical activity levels of the US workforce. Preventive Medicine. 2007; 44:432–436. [PubMed: 17321584]

Centers for Disease Control and Prevention. Prevalence of leisure-time and occupational physical activity among employed adults—United States 1990. Morbidity and Mortality Weekly Report. 2000; 49(19):420–424. [PubMed: 10905821]

Centers for Disease Control and Prevention. Prevalence of regular physical activity among adults—United States, 2001 and 2005. Morbidity and Mortality Weekly Report. 2007; 56(46):1206–1212.

Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion. About BMI for adults. 2014. Retrieved from http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html

Centers for Disease Control and Prevention, National Centers for Health Statistics. The National Health and Nutrition Examination Survey questionnaire and exam protocol. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2005. Retrieved from http://www.cdc.gov/nchs/about/major/nhanes/nhanes2003–2004/questexam03_04.htm

Cohen, B.Bulatao, RA., Anderson, NB., editors. Critical perspectives on racial and ethnic differences in health in late life. Washington, DC: National Academies Press; 2004.

Cohen, S., Syme, S. Social support and health. San Francisco, CA: Academic Press; 1985.

Crespo C, Smit E, Andersen R, Carter-Pokras O, Ainsworth B. Race/ethnicity, social class and their relation to physical inactivity during leisure time: Results from the Third National Health and Nutrition Examination Survey, 1988–1994. American Journal of Preventive Medicine. 2000; 18:46–53. [PubMed: 10808982]

Gaskin DJ, Thorpe RJ Jr, McGinty EE, Bower K, Rohde C, Young JH, LaVeist TA, Dubay L. Disparities in Diabetes: The Nexus of Race, Poverty, and Place. American Journal of Public Health. 2014; 104:2147–2155. DOI: 10.2105/AJPH.2013.301420 [PubMed: 24228660]

Giles-Corti B, Donovan RJ. The relative influence of individual, social and physical environment determinants of physical activity. Social Science & Medicine. 2002; 54:1793–1812. [PubMed: 12113436]

Griffith DM, Gunter K, Allen JO. Male gender role strain as a barrier to African American men's physical activity. Health Education & Behavior. 2011; 38:482–491. [PubMed: 21632436]

Griffith, DM., Schulz, AJ., Johnson, J., Herbert, K. Implications of racism for Black Americans' diabetes management and outcomes. In: Jack, L., editor. Diabetes in Black America: Public health and clinical solutions to a national crisis. Munster, IN: Hilton Publishing; 2010. p. 252-271.

Griffith, DM., Thorpe, RJ, Jr. Men's Physical Health and Health Behaviors. In: Wong, JY., Wester, SR., editors. Handbook of the Psychology of Men and Masculinities. Washington, DC: American Psychological Association; 2016.

Harris K, Lee H, DeLeone F. Marriage and health in the transition to adulthood: Evidence for African Americans in Add Health. Journal of Family Issues. 2010; 31:1106–1143. [PubMed: 21833154]

He X, Baker D. Differences in leisure-time, household, and work-related physical activity by race, ethnicity, and education. Journal of General Internal Medicine. 2005; 20:259–266. [PubMed: 15836530]

Hooker SP, Wilcox S, Burroughs EL, Rheaume CE, Courtenay W. The potential influence of masculine identity on health-improving behavior in midlife and older African American men. Journal of Men's Health. 2012; 9(2):79–88.

Hossain Z, Roopnarine JL. Division of household labor and child care in dual-earner African-American families with infants. Sex Roles. 1993; 29:571–585.

Kruger J, Kohl H, Miles I. Prevalence of regular physical activity among adults—United States, 2001 and 2005. Morbidity and Mortality Weekly Report. 2007; 56(46):1209–1212. [PubMed: 18030281]

Main DS, Whitley EM, Rincon PA, McGloin J, Hocker MA, Thomas SK, Iwasaki P. Cutting cardiovascular risk in barbershops. Journal of Men's Health. 2009; 6:325–330.

Marshall S, Jones D, Ainsworth B, Reis J, Levy S, Macera C. Race/ethnicity, social class, and leisuretime physical inactivity. Medicine & Science in Sports & Exercise. 2007; 39:44–51. [PubMed: 17218883]

Mozaffarian D, Afshin A, Benowitz NL, Bittner V, Daniels SR, Franch HA, … Zakai NA. Population approaches to improve diet, physical activity, and smoking habits: A scientific statement from the American Heart Association. Circulation. 2012; 126:1514–1563. [PubMed: 22907934]

Nomaguchi K, Bianchi S. Exercise time: Gender differences in the effects of marriage, parenthood, and employment. Journal of Marriage and Family. 2004; 66:413–430.

Riley DL, Mark AE, Kristjansson E, Sawada MC, Reid RD. Neighbourhood walkability and physical activity among family members of people with heart disease who participated in a randomized controlled trial of a behavioural risk reduction intervention. Health & Place. 2013; 21:148–155. [PubMed: 23474354]

Sallis J, Saelens B. Assessment of Physical Activity by Self-Report: Status, Limitations, and Future Directions. Research Quarterly for Exercise and Sport. 2000; 71:1–14.

Satcher, D., Lee, P., Joyner, F., U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Physical activity and health: A report of the surgeon general. 1999. Retrieved from http://www.cdc.gov/nccdphp/sgr/prerep.htm

StataCorp. Stata statistical software: Release 11 [Computer software]. College Station, TX: Author; 2009.

Stommel M, Schoenborn C. Accuracy and usefulness of BMI measures based on self-reported weight and height: Findings from the NHANES & NHIS 2001–2006. BMC Public Health. 2009; 9:421. [PubMed: 19922675]

Robles TF, Kiecolt-Glaser JK. The physiology of marriage: Pathways to health. Physiology and Behavior. 2003; 79:409–416. [PubMed: 12954435]

Taylor WC, Poston WSC, Jones L, Kraft MK. Environmental justice: Obesity, physical activity, and healthy eating. Journal of Physical Activity & Health. 2006; 3:S30–S54. [PubMed: 28834512]

Thorpe RJ Jr, Brandon DT, LaVeist TA. Social context as an explanation for race disparities in hypertension: Findings from the exploring health disparities in integrated communities (EHDIC) study. Social Science & Medicine. 2008; 67:1604–1611. [PubMed: 18701200]

Thorpe R, Wilson-Frederick S, Bowie J, Coa K, Clay O, Laveist T, Whitfield K. Health behaviors and all-cause mortality in African American men. American Journal of Men's Health. 2013a; 7(Suppl. 4):8S–18S.

Thorpe RJ Jr, Richard P, Bowie JV, LaVeist TA, Gaskin DJ. Economic burden of men's health disparities in the United States. International Journal of Men's Health. 2013b; 12:195–212.

Thorpe RJ Jr, Bowie JV, Wilson-Frederick SM, Coa KI, LaVeist TA. Association between race, place, and preventive health screenings among men: Findings from the exploring health disparities in integrated communities study. American Journal of Men's Health. 2013c; 7:220–227. DOI: 10.1177/1557988312466910

Thorpe RJ Jr, Bell C, Kennedy-Hendricks A, Harvey J, Smolen JR, Bowie JV, Laveist TA. Disentangling race and social context in understanding disparities in chronic conditions among men. Journal of Urban Health. 2015; 92:83–92. [PubMed: 25168686]

Tucker J, Mueller J. Spouses' social control of health behaviors: Use and effectiveness of specific strategies. Personality and Social Psychology Bulletin. 2000; 26:1120–1130.

Umberson D. Gender, marital status and the social control of health behavior. Social Science & Medicine. 1992; 34:907–917. [PubMed: 1604380]

U.S. Department of Health and Human Services. Physical activity guidelines for Americans 2008. 2008. Retrieved from http://www.health.gov/paguidelines/

Warner DF, Hayward MD. Early-life origins of the race gap in men's mortality. Journal of Health and Social Behavior. 2006; 47:209–226. [PubMed: 17066773]

Williams DR. The health of men: Structured inequalities and opportunities. American Journal of Public Health. 2003; 93:724–731. [PubMed: 12721133]

Wilson DK, Kirtland KA, Ainsworth BE, Addy CL. Socioeconomic status and perceptions of access and safety for physical activity. Annals of Behavioral Medicine. 2004; 28:20–28. [PubMed: 15249256]

Table 1

Distribution of Characteristics of Men in NHANES by Race, 1999 to 2006.

Demographic variable	African American (*n* = 5,095)	White (*n* = 7,837)	Statistical test value	*p* Value
Age (mean ± *SE*)	32.0 ± 0.34	46.2 ± 0.38	*t* = −7.53	<.001
Marital status (%)				
Married/living as married	50.3	68.9	*t* = −24.1	<.001
Never married	49.7	31.1	T = 16.6	<.001
Income (%)				
<$35,000	55.4	28.7	*t* = 12.3	<.001
$35,000-$75,000	29.1	37.7	*t* = −5.8	<.001
[3]$75,000	15.6	33.6	*t* = −9.1	<.001
Education (%)				
Less than 12th grade	31.1	13.2	*t* = 10.9	<.001
High school graduate/GED	24.3	27.4	*t* = −2.2	.031
Some college or AA degree	30.8	30.0	*t* = 0.7	.510
College graduate or above	13.8	29.4	*t* = −10.1	<.001
Weight status (%)				
Normal	35.0	30.2	*t* = 13.3	<.001
Overweight	34.4	40.2	*t* = −16.1	<.001
Obese	30.5	29.6	*t* = 2.0	.050
Smoking status (%)				
Current smoker	32.8	27.0	*t* = −0.8	.410
Former smoker	18.0	31.8	*t* = −15.2	<.001
Never smoked	49.2	41.2	*t* = 10.3	<.001
Self-rated health (%)				
Fair/poor	19.5	13.5	*t* = 3.9	<.001
Adherence to physically activity guidelines (%)	53.6	66.7	*t* = −7.53	<.001

Note. NHANES = National Health and Examination Survey; AA = African American.

Table 2

Association of Physical Activity With Race and Marital Status.

	Odds ratio [95% confidence interval]		
Variables	**Model 1**	**Model 2**	**Model 3**
Race and marital status			
White married	1.00	1.00	1.00
White unmarried	0.94 [0.81, 1.10]	0.90 [0.76, 1.06]	0.96 [0.81, 1.13]
African American married	0.47 [0.41, 0.54]*	0.52 [0.46, 0.60]	0.53 [0.46, 0.61]
African American unmarried	0.41 [0.36, 0.47]*	0.55 [0.48, 0.63]	0.58 [0.50, 0.68]
Age		0.99 [0.98, 0.99]	0.99 [0.99, 0.99]
Income			
>$35,000		1.00	1.00
$35,000-$75,000		1.33 [1.18, 1.50]	1.22 [1.07, 1.39]
[3]$75,000		1.68 [1.39, 2.02]	1.52 [1.25, 1.84]
Education			
Less than 12th grade		1.00	1.00
High school graduate/GED		1.54 [1.31, 1.79]	1.42 [1.21, 1.67]
Some college or African American degree		1.98 [1.69, 2.33]	1.74 [1.47, 2.05]
College graduate or above		2.72 [2.17, 3.40]	2.15 [1.71, 2.71]
Weight status			
Normal			1.00
Overweight			0.98 [0.84, 1.15]
Obese			0.82 [0.69, 0.98]
Smoking status			
Never smoked			1.00
Current smoker			0.71 [0.62, 0.82]
Former smoker			1.01 [0.87, 1.17]
Fair/poor self-rated health			0.47 [0.40, 0.57]

Note. Model 1 regresses physical activity on race and marital status. Model 2 regresses physical activity on race, marital status, age, income, and education. Model 3 adjusts for age, income, education, weight status, smoking status, and self-rated health.

* *p* value less than .001.

** *p* value less than .005.

*** *p* value less than .05.