Educational Attainment and Exercise Frequency in American Women; Blacks' Diminished Returns

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Abstract

Background: Minorities' Diminished Returns (MDRs) refer to smaller protects health effects of socioeconomic status (SES) indicators for Blacks and other minority groups than Whites.

Objectives: The current study aimed to explore Black- White differences in the association between educational attainment and exercise frequency among women in the US.

Methods: For the current study, we used the National Survey of American Life's (NSAL) data which included 3,175 women who were either White ($n = 876$) or Black ($n = 2,299$). The independent variable was educational attainment. The dependent variable was exercise frequency. Age, region, household income, financial distress, marital status, unemployment, and depression were the covariates. Race was the focal moderator. Linear regression was applied for data analysis.

Results: In the overall sample of women, high educational attainment was associated with higher exercise frequency (b = 0.07, 95% CI = 0.02–0.12). Race and educational attainment showed a significant interaction (b = −0.09, 95% CI = −0.19–0.00), suggestive of a smaller effect of education attainment on exercise frequency for Black women than White women. In race specific models, high educational attainment was associated with higher exercise frequency for White (b = 0.12, 95% CI =0.04–0.20) but not Black (b = 0.03, 95% CI = −0.03–0.08) women.

Conclusion: In line with the past research on MDRs, White women gain more health from their educational attainment than Black women. It is not race or class but race and class that shape the health behaviors of American women.

Keywords

race; ethnicity; population groups; Blacks; African-American; socioeconomic status; education; exercise; physical activity

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Background

Minorities' Diminished Returns (MDRs) refer to weaker effects of socioeconomic status (SES) on health and well-being of Blacks than Whites (1, 2). MDRs are documented for the effects of educational attainment(3), employment(4), household income(5), and marital status (6) in Blacks(3), Hispanics (7, 8), and sexual minorities (9). The MDRs of education and other SES indicators may have some role in explaining why racial health gaps have persisted over time, despite enormous investments made to close them (1, 2).

Previous studies have shown MDRs for the effects of SES on chronic disease (5), obesity (10), self-rated health (11), depression (12), anxiety (6), drinking (13, 14), suicide (15), smoking (16), impulsivity (17), and mortality(18) for Black families. One study also showed MDRs for physical activity in older adults (19). Same effects are shown for asthma (5), attention-deficit/hyperactivity disorder (ADHD) (20) and hypertension (21). We are, however, unaware of any previous studies on MDRs of Black women for the effects of educational attainment on exercise frequency.

We conducted this study to investigate MDRs of educational attainment for Black women on exercise frequency. Informed by the MDRs theory (1, 2), we expected smaller effect of education attainment on exercise frequency for Black in comparison to White women.

Methods

The NSAL is a national survey of Black and White (non-Hispanic) adults in the U.S, in 2003. The NSAL used a multi-stage sampling design to recruit a nationally representative sample of Blacks and Whites. The NSAL applied a household probability sampling strategy to sample White and Black American adults. The NSAL African American (called Black in this study) and White samples were selected from rural areas, large cities, and other urban areas. The NSAL sampling closely followed that of the National Survey of Black Americans (NSBA) (22, 23).

The NSAL sample composed of adults who were at least 18 years old. Participants were eligible if they were 1) residing in the coterminous US (48 states), 2) were non-institutionalized, and 3) were able to complete a structured interview in English. As a result, the study did not recruit individuals who were residing in long-term medical care settings, nursing homes, jails, or prisons (22, 23). The analytical sample for this paper was 3,175 women who were either White ($n = 876$) or Black ($n = 2,299$) women.

Fully structured interviews were used for data collection. All interviews were performed in English language. Interviews took 140 minutes on average. Most (82%) interviews were face-to-face while a minority of the interviews (18%) were performed by telephone. The Computer Assisted Personal Interviewing (CAPI) was used for interviews. The CAPI is effective in enhancing the survey data quality particularly when the survey instrument is long and complex with considerable skip patterns. Response rate was about 71% for African Americans (called Blacks in this study) (22, 23).

The variables and constructs used for this study included race/ethnicity, demographic factors (age), SES (education attainment, household income, financial instability, unemployment, and marital status), region, mental health (depression), and exercise frequency. Age was the only demographic variable in the current study. Age was treated as a continuous measure (interval). Level of education attainment was measured as the independent variable, measured as self-reported years of education. As an interval measure, a higher score was indicative of a higher educational attainment. Household income was a covariate in this study. Self-reported household income was collected and top coded at USD 200,000 for confidentiality. Only 35 individuals reported income more than USD 200,000 in the NSAL, which was recoded as 200,000. We treated household income as an interval / continuous measure, with a higher number reflecting higher SES. To help with the interpretability of the regression coefficients, we divided household income by 10,000. As a result, our regression coefficients for income reflect the effect of each USD10,000 rather than USD1 increase in household income on the outcomes. Financial instability was measured using the following two items. "How difficult is it for (you/your family) to meet the monthly payments on your (family's) bills?" "How much do you worry that your total (family) income will not be enough to meet your (family's) expenses and bills?" Responses ranged from 1 to 4. We calculated a sum score ranging from 2 to 8 where a higher score indicated more financial distress. The study measured employment status as a dichotomous variable (unemployed 1, any other status 0). Other statuses included full- and half- time work, and not being in workforce (for example being a student, retired, or housekeeper). This study measured marital status as a dichotomous variable coded as 1 for married and 0 for any other status (divorced, separated, never married, widowed). The study measured region of country (place of residence) as a nominal variable with the following four categories: Northeast, Midwest, South, and West. The study measured lifetime major depression, using the Composite International Diagnostic Interview (CIDI). Developed by Kessler for the WHO project initiated in 2000, the CIDI is a structural diagnostic interview schedule that evaluates diagnostic criteria based on Diagnostic and Statistical Manual, IV (DSM-IV). Although CIC does not make a clinical diagnosis, it determines who endorses criteria for psychiatric disorders based on DSM-IV-TR. Clinical reappraisal and validations studies have shown high validity of CIDI based-diagnosis of depression. CIDI is commonly used for Blacks(24–26). We controlled for MDD because it may confound the effect of SES and exercise frequency.

The study measured exercise frequency using the following three items: 1) How often do you work in the garden or the yard?, 2) How often do you engage in active sports or exercise?, and 3) How often do you take walks?" Response items ranged from 1 (never) to 4 (often). We calculated a sum score, ranging from 3 to 12, with a higher score indicating more frequent exercise.

In the NSAL, race/ethnicity was self-identified by the participants. Participants self-identified themselves either as African Americans or Whites. African Americans is defined as Blacks with no ancestral ties to Caribbean or Latino countries. In the current paper, we use the term Black for African Americans.

Due to the survey design that involved sapling weights, we used Stata 15.0 (*Stata* Corp., College Station, TX, US) for our data analysis. We applied Taylor series linearization to re-estimate the variance and the standard errors (SEs). As a result, all of statistics reported in this paper generate nationally representative results. We used Svy linear regression models to perform our multivariable modeling. Before performing our regression modeling, we ruled out the presence of multi-collinearity among study variables. We also checked the linear distribution of residuals before performing our linear regression models.

We performed four linear regression models overall. In all models, education attainment was the independent variable of interest, exercise frequency was the dependent variable of interest, age, household income, region, financial distress, marital status, unemployment, and depression were covariates, and race/ethnicity was the focal effect modifier. Covariates were selected based on a literature review. Our *Model 1* was performed in the overall sample in the absence of the interaction term. Our *Model 2* included race by educational attainment interaction term. *Model 3* and Model *4* were race -stratified models which were run for White and Black women, respectively. From our linear regression models, we reported regression coefficient (*b*), and 95% confidence interval (CI).

The University of Michigan Institutional Review Board (IRB) approved the NSAL study protocol (B03-00004038-R1). All participants provided written informed consent. All procedures were in line with the 1964 Helsinki Declaration. Respondents received financial compensation (monetary incentive) for their participation.

Results

This study included 3,175 women who were either White (*n* = 876) or Black (*n* = 2,299). Table 1 provides a summary of descriptive characteristics for the pooled sample of women as well as by race. Black women had lower educational attainment and household income than White women. Black women were also less likely to be married and reported lower exercise frequency in comparison to White women. (Table 1).

Table 2 summarizes the results of four linear regression models. Based on *Model 1* that did not include any interaction term, high educational attainment (b = 0.07, 95% CI = 0.02–0.12) was associated with higher exercise frequency net of confounders. *Model 2* showed a negative interaction (b = –0.09, 95% CI = –0.19–0.00), which was suggestive of smaller effect of educational attainment on exercise frequency for Black women than White women. *Model 3* showed significant effect of educational attainment on exercise frequency for Whites (b = 0.12, 95% CI =0.04–0.20). *Model 4* failed to show any effect of educational attainment on exercise frequency among Black women (b = 0.03, 95% CI = –0.03–0.08) (Table 2).

5. Discussion

The current study used a nationally representative sample of White and Black American women to test whether the effect of educational attainment on exercise frequency depends on race. We observed weaker effects of educational attainment on exercise frequency in Black than White women, which is in line with MDRs.

This study documented MDRs of educational attainment on Black women's exercise frequency, which is in support of the MDRs theory (1, 2). In the US, education is not "the great equalizer" (27, 28). As shown by Zajacova, education better promotes the health of Whites than Blacks (27, 28).

The findings reported here are similar to the literature showing stronger effects of educational attainment and other SES indicators on chronic disease (5), obesity (10), self-rated health (11), depression (12), happiness (29), drinking (13, 14), diet (30), suicide (15), smoking (16), and impulsivity (17) for Whites than Blacks.

Low education quality due to the scarcity of educational resources in inner cities where majority of Blacks live are partially responsible for their MDRs of educational attainment. The magnitude of the health effects of human capital are conditional upon the quality of education as well as how much labor market allows translation of human capital to income / wealth, which all depend on race. US system gives Whites more chance than Blacks to translate their available human resources into measurable outcomes (29, 31). Racial minority status bounds how much health gains follow educational attainment(3, 9, 16, 32–35).

Due to residential segregation, high SES Blacks are more likely to live in majority Black neighborhoods that are not rich in green spaces, parks, and other walkable areas(10, 36). As a result, walkability is considerably worse in the neighborhoods in the majority Black neighborhoods (37–41). Thus, even if they are interested in exercise, their environmental conditions suppress their ability to walk and exercise. In addition, unsafe neighborhoods due to high rate of crime and violence limit ability of Blacks to exercise in inner cities (37–41). As a result, compared to high SES Whites, high SES Blacks may not have the same chance for physical activity. Such contextual and environmental constraints may cause racial gaps in metabolic and cardiovascular burden between high SES Blacks and high SES Whites (10).

This study had several limitations. First, due to a cross-sectional design, our results should not be interpreted as causal. Longitudinal research is needed to test the effects of change in SES over time on future changes in exercise. Thus, there is a need for replication of the current findings using longitudinal data with multiple measurements of SES and exercise. Second, the underlying mechanisms behind differential effects of education on exercise was not investigated. Area level factors, physical environment, availability of parks and green areas and neighborhood safety and crime may be some explanatory factors for these differential effects. In addition, we had a simplistic view of exercise. There is a need to study exercise using comprehensive measures. In addition to self-report, we need to measure exercise by objective measures such as wearables. We relied on self-reported data. Tracking physical activity may reduce the measurement bias. This study was limited to White women and Black women. Future research should include men as well as other ethnic groups such as Latinos / Hispanics(19, 42–46). Despite the above limiting factors, results of the current study contribute to the existing literature as it extends the current knowledge on the non-linear and combined effects of race and SES on health and health behaviors.

Conclusion

To conclude, race modifies the effects of educational attainment on exercise frequency of American women. Educational attainment increases exercise frequency of White but not Black women. This finding is in line with the MDRs studies and theory that suggests SES indicators such as education attainment consistently generates less health gain for the members of the racial and ethnic minority groups than the members of the majority group.

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REFERENCES

1. Assari S. Health Disparities due to Diminished Return among Black Americans: Public Policy Solutions. Social Issues and Policy Review. 2018;12(1):112–45.

2. Assari S. Unequal Gain of Equal Resources across Racial Groups. Int J Health Policy Manag. 2017;7(1):1–9.

3. Assari S. Parental Educational Attainment and Mental Well-Being of College Students; Diminished Returns of Blacks. Brain Sci. 2018;8(11).

4. Assari S. Life Expectancy Gain Due to Employment Status Depends on Race, Gender, Education, and Their Intersections. J Racial Ethn Health Disparities. 2018;5(2):375–86. [PubMed: 28634876]

5. Assari S, Moghani Lankarani M. Poverty Status and Childhood Asthma in White and Black Families: National Survey of Children's Health. Healthcare (Basel). 2018;6(2).

6. Assari S, Caldwell CH, Zimmerman MA. Family Structure and Subsequent Anxiety Symptoms; Minorities' Diminished Return. Brain Sci. 2018;8(6).

7. Shervin A, Ritesh M. Diminished Return of Employment on Ever Smoking Among Hispanic Whites in Los Angeles. Health Equity. 2019;3(1):138–44. [PubMed: 31289772]

8. Assari S. Socioeconomic Status and Self-Rated Oral Health; Diminished Return among Hispanic Whites. Dent J (Basel). 2018;6(2).

9. Assari S. Education Attainment and ObesityDifferential Returns Based on Sexual Orientation. Behav Sci (Basel). 2019;9(2).

10. Assari S. Family Income Reduces Risk of Obesity for White but Not Black Children. Children (Basel). 2018;5(6).

11. Assari S, Lapeyrouse LM, Neighbors HW. Income and Self-Rated Mental Health: Diminished Returns for High Income Black Americans. Behav Sci (Basel). 2018;8(5).

12. Assari S. High Income Protects Whites but Not African Americans against Risk of Depression. Healthcare (Basel). 2018;6(2).

13. Assari S, Farokhnia M, Mistry R. Education Attainment and Alcohol Binge Drinking: Diminished Returns of Hispanics in Los Angeles. Behav Sci (Basel). 2019;9(1).

14. Assari S, Lankarani MM. Education and Alcohol Consumption among Older Americans; Black-White Differences. Front Public Health. 2016;4:67. [PubMed: 27148514]

15. Assari S. Ethnic and Gender Differences in Additive Effects of Socio-economics, Psychiatric Disorders, and Subjective Religiosity on Suicidal Ideation among Blacks. Int J Prev Med. 2015;6:53. [PubMed: 26180624]

16. Assari S, Mistry R. Educational Attainment and Smoking Status in a National Sample of American Adults; Evidence for the Blacks' Diminished Return. Int J Environ Res Public Health. 2018;15(4).

17. Assari S, Caldwell CH, Mincy R. Family Socioeconomic Status at Birth and Youth Impulsivity at Age 15; Blacks' Diminished Return. Children (Basel). 2018;5(5).

18. Assari S, Lankarani MM. Race and Urbanity Alter the Protective Effect of Education but not Income on Mortality. Front Public Health. 2016;4:100. [PubMed: 27242992]

19. Assari S, Nikahd A, Malekahmadi MR, Lankarani MM, Zamanian H. Race by Gender Group Differences in the Protective Effects of Socioeconomic Factors Against Sustained Health Problems Across Five Domains. J Racial Ethn Health Disparities. 2016.

20. Assari S, Caldwell CH. Family Income at Birth and Risk of Attention Deficit Hyperactivity Disorder at Age 15: Racial Differences. Children (Basel). 2019;6(1).

21. Assari S. Socioeconomic Determinants of Systolic Blood Pressure; Minorities' Diminished Returns. Journal of Health Economics and Development. 2019;1(1):1–11. [PubMed: 31428747]

22. Jackson JS, Neighbors HW, Nesse RM, Trierweiler SJ, Torres M. Methodological innovations in the National Survey of American Life. Int J Methods Psychiatr Res. 2004;13(4):289–98. [PubMed: 15719533]

23. Jackson JS, Torres M, Caldwell CH, Neighbors HW, Nesse RM, Taylor RJ, et al. The National Survey of American Life: a study of racial, ethnic and cultural influences on mental disorders and mental health. Int J Methods Psychiatr Res. 2004;13(4):196–207. [PubMed: 15719528]

24. Assari S. Race, Depression, and Financial Distress in a Nationally Representative Sample of American Adults. Brain Sci. 2019;9(2).

25. Assari S. Social Determinants of Depression: The Intersections of Race, Gender, and Socioeconomic Status. Brain Sci. 2017;7(12).

26. Assari S, Moazen-Zadeh E. Ethnic Variation in the Cross-sectional Association between Domains of Depressive Symptoms and Clinical Depression. Front Psychiatry. 2016;7:53. [PubMed: 27148084]

27. Zajacova A, Johnson-Lawrence V. Anomaly in the education-health gradient: Biomarker profiles among adults with subbaccalaureate attainment levels. SSM Popul Health. 2016;2:360–4. [PubMed: 28580414]

28. Zajacova A, Rogers RG, Johnson-Lawrence V. Glitch in the gradient: additional education does not uniformly equal better health. Soc Sci Med. 2012;75(11):2007–12. [PubMed: 22920276]

29. Assari S, Preiser B, Kelly M. Education and Income Predict Future Emotional Well-Being of Whites but Not Blacks: A Ten-Year Cohort. Brain Sci. 2018;8(7).

30. Assari S, Lankarani M. Educational Attainment Promotes Fruit and Vegetable Intake for Whites but Not Blacks. J 2018;1(1):5.

31. Assari S. Parental Education Better Helps White than Black Families Escape Poverty: National Survey of Children's Health. Economies. 2018;6(2):30.

32. Assari S. Parental Education Attainment and Educational Upward Mobility; Role of Race and Gender. Behav Sci (Basel). 2018;8(11).

33. Assari S. Educational Attainment Better Protects African American Women than African American Men Against Depressive Symptoms and Psychological Distress. Brain Sci. 2018;8(10).

34. Assari S, Hani N. Household Income and Children's Unmet Dental Care Need; Blacks' Diminished Return. Dent J (Basel). 2018;6(2).

35. Assari S, Moghani Lankarani M. Workplace Racial Composition Explains High Perceived Discrimination of High Socioeconomic Status African American Men. Brain Sci. 2018;8(8).

36. Assari S, Thomas A, Caldwell CH, Mincy RB. Blacks' Diminished Health Return of Family Structure and Socioeconomic Status; 15 Years of Follow-up of a National Urban Sample of Youth. J Urban Health. 2018;95(1):21–35. [PubMed: 29230628]

37. Malambo P, De Villiers A, Lambert EV, Puoane T, Kengne AP. Associations of perceived neighbourhood safety from traffic and crime with overweight/obesity among South African adults of low-socioeconomic status. PLoS One. 2018;13(10):e0206408. [PubMed: 30379921]

38. Assari S, Moghani Lankarani M, Caldwell CH, Zimmerman MA. Fear of Neighborhood Violence During Adolescence Predicts Development of Obesity a Decade Later: Gender Differences Among African Americans. Arch Trauma Res. 2016;5(2):e31475. [PubMed: 27679791]

39. Choi SW, Park DJ, Kim J, Park TJ, Kim JS, Byun S, et al. Association between Obesity and Neighborhood Socioeconomic Status in Korean Adolescents Based on the 2013 Korea Youth Risk Behavior Web-Based Survey. Korean J Fam Med. 2016;37(1):64–70. [PubMed: 26885325]

40. Li F, Harmer P, Cardinal BJ, Bosworth M, Johnson-Shelton D. Obesity and the built environment: does the density of neighborhood fast-food outlets matter? Am J Health Promot. 2009;23(3):203–9. [PubMed: 19149426]

41. Kwate NO. Fried chicken and fresh apples: racial segregation as a fundamental cause of fast food density in black neighborhoods. Health Place. 2008;14(1):32–44. [PubMed: 17576089]

42. Assari S. Psychosocial Correlates of Body Mass Index in the United States: Intersection of Race, Gender and Age. Iran J Psychiatry Behav Sci. 2016;10(2):e3458. [PubMed: 27822270]

43. Carter JD, Assari S. Sustained Obesity and Depressive Symptoms over 6 Years: Race by Gender Differences in the Health and Retirement Study. Front Aging Neurosci. 2016;8:312. [PubMed: 28101050]

44. Assari S, Lankarani MM. Mediating Effect of Perceived Overweight on the Association between Actual Obesity and Intention for Weight Control; Role of Race, Ethnicity, and Gender. Int J Prev Med. 2015;6:102. [PubMed: 26644903]

45. Assari S, Lankarani MM. The Association Between Obesity and Weight Loss Intention Weaker Among Blacks and Men than Whites and Women. J Racial Ethn Health Disparities. 2015;2(3):414–20. [PubMed: 26462289]

46. Assari S. Additive Effects of Anxiety and Depression on Body Mass Index among Blacks: Role of Ethnicity and Gender. Int Cardiovasc Res J. 2014;8(2):44–51. [PubMed: 24936480]

Table 1.

Descriptive statistics in the overall sample of women and by race.

	All women (*N* = 3,175)				White Women (*n* = 876)				Black Women (*n* = 2,299)			
	Mean	**SE**	**95% CI**		**Mean**	**SE**	**95% CI**		**Mean**	**SE**	**95% CI**	
Age (Years) [*a]	42.96	0.89	41.17	44.76	43.69	1.72	40.02	47.35	42.22	0.58	41.05	43.40
Household Income (USD10000) [* a]	3.73	0.18	3.37	4.08	4.25	0.30	3.62	4.89	3.19	0.12	2.95	3.43
Financial instability [* a]	2.06	0.07	1.92	2.19	1.98	0.12	1.74	2.23	2.13	0.06	2.01	2.25
Education (Years) [* a]	12.99	0.14	12.70	13.27	13.49	0.25	12.95	14.03	12.47	0.09	12.28	12.66
Exercise Frequency [* a]	8.08	0.09	7.90	8.25	8.49	0.14	8.19	8.79	7.65	0.07	7.51	7.80
	%	**SE**	**95% CI**		**%**	**SE**	**95% CI**		**%**	**SE**	**95% CI**	
Region [* b]												
Northeast	16.20	0.03	11.69	22.02	16.22	0.05	8.17	29.62	16.18	0.01	13.97	18.68
Midwest	13.58	0.02	10.80	16.94	8.51	0.02	4.52	15.45	18.73	0.02	15.72	22.17
South	55.88	0.04	47.36	64.07	55.34	0.08	38.24	71.27	56.43	0.02	52.17	60.59
West	14.34	0.03	9.12	21.83	19.94	0.06	10.19	35.34	8.66	0.01	6.73	11.07
Unemployment [* b]												
No	91.50	0.01	89.47	93.17	94.21	0.02	89.54	96.87	88.74	0.01	86.94	90.33
Yes	8.50	0.01	6.83	10.53	5.79	0.02	3.13	10.46	11.26	0.01	9.67	13.06
Marital Status [* b]												
Others	58.01	0.02	54.54	61.41	51.59	0.03	44.77	58.35	64.53	0.01	61.87	67.11
Married	41.99	0.02	38.59	45.46	48.41	0.03	41.66	55.23	35.47	0.01	32.89	38.13
Lifetime Depression [* b]												
No	81.87	0.01	79.01	84.42	78.37	0.02	72.72	83.11	85.43	0.01	83.76	86.96
Yes	18.13	0.01	15.58	20.99	21.63	0.02	16.89	27.28	14.57	0.01	13.04	16.24

[*] p < 0.05 for comparison of Blacks and Whites.

[a:] independent sample t test,

[b:] Chi square

Source: National Survey of American Lives (NSAL) 2003.

Table 2.

Estimated net effects of education attainment on exercise frequency in the pooled sample.

	B	95% CI	B	95% CI	B	95% CI	B	95% CI
	Model 1		*Model 2*		*Model 3*		*Model 4*	
	All Women (n = 3,175)		All Women (n = 3,175)		White Women (n = 876)		Black Women (n = 2,299)	
Race (Blacks)	−0.62***	−0.92 – −0.33	0.60	−0.71 – 1.92				
Age	0.00	−0.01 – 0.01	0.00	−0.01 – 0.01	0.00	−0.02 – 0.02	0.00	−0.01 – 0.00
Region								
Northeast	−0.63	−1.31 – 0.05	−0.64	−1.32 – 0.04	−0.79	−1.80 – 0.23	−0.49	−1.27 – 0.29
Midwest	−0.31	−0.90 – 0.28	−0.31	−0.91 – 0.30	−0.50	−1.59 – 0.60	−0.25	−1.11 – 0.60
South	−0.38	−0.87 – 0.12	−0.38	−0.89 – 0.12	−0.38	−1.11 – 0.35	−0.42	−1.18 – 0.34
West	1.00		1.00		1.00		1.00	
Household Income (USD10000)	0.07**	0.02 – 0.11	0.07**	0.03 – 0.11	0.07	0.01 – 0.13	0.07*	0.02 – 0.12
Financial instability	−0.08*	−0.16 – 0.00	−0.08*	−0.17 – 0.00	−0.07	−0.26 – 0.11	−0.08*	−0.13 – −0.02
Unempolyed	−0.20	−0.79 – 0.39	−0.24	−0.84 – 0.37	−1.03	−2.33 – 0.28	0.19	−0.08 – 0.47
Married	0.15	−0.18 – 0.49	0.16	−0.18 – 0.49	0.15	−0.47 – 0.78	0.14	−0.13 – 0.41
Major Depression (Lifetime)	−0.14	−0.51 – 0.24	−0.15	−0.53 – 0.23	−0.15	−0.78 – 0.48	−0.21	−0.53 – 0.11
Education (Years)	0.07**	0.02 – 0.12	0.12**	0.04 – 0.19	0.12**	0.04 – 0.20	0.03	−0.03 – 0.08
Education (Years)× Race (AA)			−0.09*	−0.19 – 0.00				

Source: National Survey of American Lives (NSAL) 2003

Linear regression was used.