



Race, Education Attainment, and Happiness in the United States

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Abstract

Background and aims: As suggests by the Minorities' Diminished Returns (MDR) theory, education attainment and other socioeconomic status (SES) indicators have a smaller impact on the health and well-being of non-White than White Americans. To test whether MDR also applies to happiness, in the present study, Blacks and Whites were compared in terms of the effect of education attainment on the level of happiness among American adults.

Methods: General Social Survey (1972-2016) is a series of national surveys that are performed in the United States. The current analysis included 54785 adults (46724 Whites and 8061 Blacks). The years of schooling (i.e., education attainment) and happiness were the main independent variable and the main dependent variable of interest, respectively. In addition, other parameters such as gender, age, employment status, marital status, and the year of the survey were the covariates and race was the focal effect modifier. Finally, the logistic regression model was used to analyze the data.

Results: Based on the results, high education attainment was associated with higher odds of happiness in the pooled sample. Further, a significant interaction was found between race and education attainment on the odds of happiness, showing a larger gain for Whites compared to Blacks. Race-specific models also confirmed this finding (i.e., a larger magnitude of the effect of education for Whites compared to Blacks).

Conclusion: Overall, the MDR theory also applies to the effect of education attainment on happiness. Blacks' disadvantage in comparison to the Whites in gaining happiness from their education may be due to the structural, institutional, and interpersonal racism and discrimination in the US. Therefore, there is a need for economic and public policies that can minimize the Blacks' diminished returns of education attainment and other SES resources.

Keywords: Blacks, Whites, Race, Ethnicity, Class, Socioeconomic status, Happiness

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Received: 12 Dec. 2018
Accepted: 4 May 2019
ePublished: 21 June 2019



Introduction

Happiness (i.e., the feelings of joy and pleasure, as well as a positive emotion, is considered a major human experience. Research shows a close link between socioeconomic status (SES) and happiness/positive emotions¹ and positive emotions are essential regardless of age, gender, race, and ethnicity.² Emotions such as happiness protect individuals against depression, which is generally regarded as one of the most chronic debilitating illnesses worldwide and in the United States, in particular.³ Happiness and positive emotions are under the influence of SES, particularly education attainment^{4,5} while being essential for maintaining a sense of well-being² and self-esteem.⁶ Affect correlates with SES. In other words, low SES individuals are less happy^{1,3} while individuals with higher SES report more positive affect.^{7,8}

According to the Minorities' Diminished Returns (MDR) theory,^{9,10} the effects of SES indicators on a variety of positive outcomes are systemically smaller for racial and ethnic minority groups including the Blacks compared to Whites.¹¹ Empirical evidence suggests that education has smaller effects on different factors such as income,¹²⁻¹⁴ alcohol drinking,¹⁵ cigarette smoking,¹⁶ eating habits,¹⁷ chronic medical disease,¹⁸ obesity,¹⁹ self-rated health,²⁰⁻²² and mortality²³⁻²⁶ for Blacks compared to Whites. However, it is not well understood if there is any relative disadvantage of Blacks compared to Whites regarding the link between high SES and happiness.²⁷

MDR is attributed to economic¹⁴ and psychological²⁸ processes that are connected to racism and discrimination. For example, Whites achieve more tangible outcomes than minority groups, including the Blacks because many social

and economic processes negatively affect the Blacks' mental health, even that of those who have successfully climbed the social ladder (high SES). At each level of SES, the U.S. society favors Whites to non-Whites and thus treats the Blacks and the other minorities unfavorably, therefore, high SES Blacks fail to gain as many positive outcomes as they deserve due to their SES. In addition, Blacks have worse access to the opportunity structure, and education does not generate the same income and employment for the Blacks compared to Whites. Everyday lives of high-SES Blacks are also different from those of their high-SES White counterparts since high SES Blacks experience more not less²⁸ prejudice and discrimination.²⁹⁻³¹ It is argued that racism operates across the levels and institutions that are bound to the tangible health gains that follow SES for Blacks.^{29,32,33}

However, a large body of literature on MDR is related to negative rather than positive outcomes, showing that high SES better protects the Whites than the Blacks against depression and depressive symptoms.^{18,34-36} For example, some reports showed the increased risk of depression,¹⁸ anxiety,³⁷ and suicide³⁴ among high SES Blacks. Further, in studies with nationally representative samples, high education³⁶ and income³⁵ were associated with the high risk of major depressive disorder^{35,36} and depressive symptoms¹⁸ for youth³⁵ and adults.^{18,36} These results are replicated in cross-sectional^{35,36} and longitudinal¹⁸ studies, which are the extreme cases of MDR where SES not only shows no a positive effect but also correlates with poor outcomes.¹

Objectives

The main aim of this investigation was to compare Black and White American adults for the effect of education attainment on their happiness. In line with previous studies³⁸ and informed by the MDR theory,^{9,10} high education attainment is expected to result in greater achievement for Whites than Blacks.

Methods

Design and Setting

Using a cross-sectional survey design, this analysis used data from the General Social Survey (GSS; 1972-2016). Since 1972, the University of Chicago has conducted the GSS in order to monitor the societal change and social trends of American society over time.

General Social Survey

The GSS has gathered data on contemporary American society over more than four decades and monitored the trends regarding the attitudes, behaviors, and beliefs of the Americans. The GSS helps us understand how the structure and function of the U.S. society are generally changing and in terms of race, class, and gender, in particular. The data further provide an excellent opportunity to run time series

and compare the U.S. subgroups, and finally, to compare the United States with its peer industrial countries. Over the past decades, GSS has become a unique source of scholarly works in the fields of sociology, economics, policy-making, and demography, among others. GSS collects data on major social issues such as race relations, the quality of life, and trust in U.S. institutions as well.³⁹

Analytical Sample

The current study included 54 785 adults who were either Whites (n = 46 724) or Blacks (n = 8061).

Study Measures

Study variables included race, age, gender, education attainment, employment status, marital status, the year of survey, and happiness.

Education Attainment. This variable was measured as the years of schooling, varying from 0 to 22. Moreover, it was treated as an interval measure. In other words, a higher score reflected higher education attainment/the years of schooling.

Happiness. It was measured using a single item that measured general happiness and read as "Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?" The response options included (1) Very happy, (2) Pretty happy, and (3) Not too happy. The item was asked from 1972 to 2010.

Demographic Variables. Gender, age (years), employment status, marital status, and the year of the survey were the study covariates. Age was an interval variable which was measured in years and gender was a dichotomous measure [males =0 (reference group) and females =1].

Study Year. The year of study was operationalized as an interval variable ranging from 1972 to 2016.

Socioeconomic Status. Two SES covariates, namely, employment and marital status were included in this study. Employment was measured as an ordinal variable and contained eight categories as "(1) Working Full-time, (2) Working Part-time, (3) Temporarily Not Working, (4) Unemployed, Laid Off, (5) Retired, (6) School, (7) Keeping House, and (8) Other". Working Full-time was considered as the reference group. Additionally, marital Status was assessed as a nominal variable and encompassed five categories including (1) Married, (2) Widowed, (3) Divorced, (4) Separated, and (5) Never Married". The first option was the reference category.

Race. The self-identified race was the focal moderating variable that was treated as a dichotomous variable (i.e., non-Hispanic Whites =0 [the reference group] and Blacks =1).

Statistical Analysis

Data were analyzed using the Stata, version 15. The frequency (%) and mean (standard error: SE) were

reported to describe the participants, overall, and by race. In addition, four logistic regressions were used including two models in the pooled sample (*Model 1* and *Model 2*) and two models specific to the racial groups (*Model 3* and *Model 4*). In all models, happiness (1= being very happy/pretty happy and 0= not too happy) and education attainment (the years of education) were the primary outcome (dependent variable) and the primary predictor (independent variable), respectively, and age, gender, employment status, marital status, the year of survey were the covariates. *Model 1* only had the main effects while *Model 2* included the race by education attainment interaction term. Finally, *Model 3* and *Model 4* estimated the effects of education attainment on happiness in Whites and Blacks, respectively. The odds ratio (OR), SE, 95% confidence interval (CI), z-value, and *P* values were reported based on the obtained data.

Results

Descriptive Statistics

This study included 54 785 adults who were either White ($n = 46\,724$) or Black ($n = 8061$). Blacks were less happy compared to Whites who had higher education attainment.

Pooled Sample Multivariable Models

Table 1 shows the results of the two logistic regression models, both in the overall sample. Based on *Model 1* that included no interaction term, high education attainment was associated with higher odds of happiness independent of race, age, gender, employment status, marital status, and the year of the survey. Conversely, *Model 2* demonstrated an interaction between race and education attainment on happiness, suggesting a smaller effect of education on happiness for Blacks compared to Whites.

Race-Specific Multivariable Models

The results of the two logistic regression models, each in one race, are presented in Table 2. *Model 3* and *Model 4*, performed in Whites and Blacks, respectively, revealed that high education attainment was related to the higher odds of happiness regardless of age, gender, and the year of the survey for both groups. However, the magnitude of the association was larger for Whites compared to Blacks.

Discussion

The results of the current study indicated that high education attainment increased happiness overall, however, this effect was disproportionately larger for Whites compared to Blacks. Based on the results, the MDR theory could apply to happiness.

Supporting the MDR theory,^{9,10,19} we found smaller effects of education attainment on happiness among the Blacks than Whites. An extensive body of research has shown similar patterns for the effects of SES on other economic and health outcomes.^{24,29,34,40-44} An increase

in education attainment leads to an increase in income, but the boosting effect of education on income is not comparable between Whites and Blacks.^{12,13} As a result, highly educated Blacks experience higher obesity, poor sleep, physical inactivity,¹⁵ depression,¹⁸ suicide,³⁴ and mortality²⁴ compared to highly educated Whites. Similar results are found for individuals⁴³ and families, that is, the transgenerational effects.⁴⁴⁻⁴⁷

Most traditional theories that connect SES to the outcomes focused on the universal effects of SES resources. Link and Phelan's (1995) Fundamental Cause Theory suggests that SES is a fundamental determinant and the root cause of positive outcomes, including the affect, emotions, and mental health.⁴⁸ The same theory conceptualizes racism as a fundamental cause as well.⁴⁵ Despite the emphasis of the mainstream literature on the gains of SES, there is substantial evidence suggesting that high SES may operate as a risk factor for poor mental health outcomes for the Blacks.^{11,18,19,32,34,43,44} What makes MDR distinct from the other theories is that it focuses on group differences in gains instead of the universal effects.^{9,10}

The MDR theory does not argue that racial and ethnic groups are inherently different in their abilities to turn their education attainment to tangible positive outcomes. In our point of view, such interpretation should be avoided since it is considered racist. Therefore, we need to fix the unfair social system that has historically oppressed Blacks instead of blaming the victims. In addition, Blacks gain less from their education, not because of their culture, morality, or traits, but the fact that their lives have been and are still affected by systemic racism. Slavery is over, but racism continues.⁴⁷

Limitations and Strengths

Our study had several limitations. One main weakness of this study was the unbalanced sample size of the Blacks and Whites although this is usually the case in health disparities research. Further, we only focused on the effect modification of race while neglecting other potential moderating factors such as gender, ethnicity, and nativity. Accordingly, it is very important to compare the diminished returns for Black men and women, as some literature has shown SES as a risk factor for Black men but not Black women.^{20,35} SES may differently influence the emotion and affect among the Black males and females. Furthermore, the present study used a cross-sectional design and longitudinal studies should be conducted in this regard as well. Moreover, our study failed to control several potential confounders such as wealth and childhood SES. Despite the above-mentioned limitations, this study contributes to the MDR literature^{10,19} by showing that it also applies to happiness. Some strengths of our study included the national scope (nationally representative samples) and large sample size.

Table 1. A Summary of the Pooled Sample Logistic Regression Models

	OR (SE)	95% CI	Z	P
Model 1 (Main Effect Model)				
Race (Black)	0.63 (0.02)	0.59 - 0.67	-13.99	< 0.001
Age	1.00 (0.00)	1.00 - 1.00	1.55	0.122
Gender (female)	1.19 (0.04)	1.12 - 1.27	5.87	< 0.001
Marital status				
Married	1.00			
Widowed	0.40 (0.02)	0.36 - 0.43	-19.52	< 0.001
Divorced	0.35 (0.01)	0.33 - 0.38	-26.54	< 0.001
Separated	0.26 (0.02)	0.23 - 0.29	-23.12	< 0.001
Never married	0.47 (0.02)	0.44 - 0.51	-19.51	< 0.001
Employment status				
Working full-time	1.00			
Working part-time	0.82 (0.04)	0.75 - 0.90	-4.13	< 0.001
Temp not working	0.59 (0.05)	0.50 - 0.70	-6.05	< 0.001
Unemployed, laid off	0.34 (0.02)	0.30 - 0.38	-18.91	< 0.001
Retired	0.82 (0.04)	0.74 - 0.90	-4.03	< 0.001
School	0.95 (0.08)	0.81 - 1.11	-0.67	0.501
Keeping House	0.66 (0.03)	0.60 - 0.71	-9.84	< 0.001
Other	0.35 (0.03)	0.30 - 0.40	-14.54	< 0.001
Education (1-20)	1.08 (0.00)	1.07 - 1.09	17.66	< 0.001
Intercept	4.16 (0.38)	3.49 - 4.97	15.77	< 0.001
Model 2 (Interaction Model)				
Race (Black)	1.15 (0.14)	0.91 - 1.45	1.15	0.251
Age (y)	1.00 (0.00)	1.00 - 1.00	1.42	0.155
Gender (female)	1.20 (0.04)	1.13 - 1.27	6.04	< 0.001
Marital status				
Married	1.00			
Widowed	0.40 (0.02)	0.36 - 0.43	-19.55	< 0.001
Divorced	0.35 (0.01)	0.33 - 0.38	-26.43	< 0.001
Separated	0.26 (0.02)	0.23 - 0.29	-23.27	< 0.001
Never married	0.47 (0.02)	0.44 - 0.51	-19.45	< 0.001
Employment status				
Working full-time	1.00			
Working part-time	0.82 (0.04)	0.74 - 0.90	-4.23	< 0.001
Temp not working	0.59 (0.05)	0.50 - 0.70	-6.13	< 0.001
Unemployed, laid off	0.34 (0.02)	0.30 - 0.38	-18.90	< 0.001
Retired	0.82 (0.04)	0.74 - 0.90	-4.08	< 0.001
At school	0.94 (0.08)	0.80 - 1.11	-0.73	0.468
Keeping house	0.66 (0.03)	0.60 - 0.71	-9.85	< 0.001
Other	0.35 (0.03)	0.30 - 0.40	-14.56	< 0.001
Education attainment (1-20)	1.10 (0.01)	1.08 - 1.11	18.11	< 0.001
Education attainment (1-20) × race (Black)	0.95 (0.01)	0.93 - 0.97	-5.25	< 0.001
Intercept	3.59 (0.34)	2.98 - 4.32	13.53	< 0.001

Future Research

All variables of the study were limited to the individual level, however, community-level factors may also have a role in this respect. Therefore, neighborhood and community factors should also be investigated in future studies. Additionally, some contextual factors such as neighborhood and workplace racial composition are needed to be included in similar research. Similarly,

personality and life purposes are among the most salient determinants of the sense of happiness. Depression and bipolar disorders are other factors that may alter the sense of happiness as well. Future research should include and further evaluate all the above-mentioned constructs. Finally, this study only focused on education attainment. Future research should also include other SES factors such as wealth, income, employment, and marital status.

Table 2. A Summary of Ethnic-Specific Logistic Regression Models

	OR (SE)	95% CI	Z	P
Model 3 (Whites)				
Age	1.00 (0.00)	1.00 - 1.00	-0.41	0.684
Gender (female)	1.24 (0.04)	1.16 - 1.32	6.18	0.000
Marital status				
Married	1.00			
Widowed	0.37 (0.02)	0.33 - 0.41	-18.89	< 0.001
Divorced	0.34 (0.01)	0.31 - 0.37	-25.06	< 0.001
Separated	0.20 (0.01)	0.18 - 0.23	-22.33	< 0.001
Never married	0.47 (0.02)	0.43 - 0.51	-17.04	< 0.001
Employment status				
Working full-time	1.00			
Working part-time	0.85 (0.05)	0.76 - 0.94	-3.07	0.002
Temp not working	0.66 (0.07)	0.54 - 0.80	-4.21	< 0.001
Unemployed, laid off	0.32 (0.02)	0.28 - 0.36	-17.16	< 0.001
Retired	0.84 (0.05)	0.75 - 0.94	-3.14	0.002
School	1.02 (0.10)	0.84 - 1.24	0.20	0.844
Keeping House	0.68 (0.03)	0.61 - 0.75	-7.76	< 0.001
Other	0.32 (0.03)	0.27 - 0.38	-13.69	< 0.001
Education (1-20)	1.09 (0.01)	1.08 - 1.10	17.22	< 0.001
Intercept	4.03 (0.41)	3.30 - 4.91	13.69	< 0.001
Model 4 (Blacks)				
Age (y)	1.01 (0.00)	1.00 - 1.01	3.90	< 0.001
Gender (female)	1.07 (0.07)	0.95 - 1.21	1.14	0.254
Marital status				
Married	1.00			
Widowed	0.58 (0.06)	0.46 - 0.72	-4.97	< 0.001
Divorced	0.47 (0.04)	0.39 - 0.56	-8.24	< 0.001
Separated	0.43 (0.04)	0.35 - 0.53	-8.26	< 0.001
Never married	0.58 (0.05)	0.50 - 0.68	-6.83	< 0.001
Employment status				
Working full-time	1.00			
Working part-time	0.71 (0.07)	0.59 - 0.87	-3.39	0.001
Temp not working	0.41 (0.07)	0.29 - 0.58	-5.02	< 0.001
Unemployed, laid off	0.40 (0.04)	0.32 - 0.49	-8.32	< 0.001
Retired	0.77 (0.09)	0.61 - 0.96	-2.29	0.022
At school	0.80 (0.12)	0.60 - 1.06	-1.55	0.122
Keeping house	0.60 (0.05)	0.51 - 0.71	-6.07	< 0.001
Other	0.43 (0.06)	0.32 - 0.58	-5.68	< 0.001
Education attainment (1-20)	1.06 (0.01)	1.04 - 1.08	5.94	< 0.001
Intercept	2.32 (0.46)	1.57 - 3.42	4.24	< 0.001

Implications for Policy and Practice

True equality is impossible unless we establish a context in which the very same SES indicators can generate the very equal returns across the racial groups. In the current system, equal education consistently results in unequal gains for the Black than White Americans. As a result, solutions should target racism across the levels and institutions. Such policies should go beyond merely equalizing the racial groups in terms of SES but eliminate the processes that cause inequality in translating the SES into the outcomes. Therefore, there is a need to eliminate the additional societal barriers in the lives of Blacks and

other racial and ethnic minority groups. In the absence of such policies, the majority group continues gaining more positive outcomes from the available resources.

Conclusions

The magnitude of the link between education attainment and happiness is unequal across the racial groups, indicating that Blacks gain less happiness than Whites from their increase in education attainment.

Ethical Approval

The GSS study protocol was approved by the University

of Chicago Institutional Review Board (IRB) and all GSS participants provided informed consent. Furthermore, the study was funded by the National Science Foundation.

Conflict of Interest Disclosures

The author declares that he has no conflict of interest.

Acknowledgment

Shervin Assari was partly supported by the National Institute on Minority Health and Health Disparities (4P60MD006923-05; PI = Vickie Mays), the National Institute of Child Health and Human Development (D084526-03), the National Cancer Institute (CA201415 02; Co-PI = Ritesh Mistry), and the National Institute on Drug Abuse (DA035811-05; PI = Marc Zimmerman). Special thanks go to Hamid Helmi, Wayne State University, for his help in editing the final draft of this paper. The General Social Survey was performed by the University of Chicago and funded by the National Science Foundation.

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How to cite the article: Assari S. Race, education attainment, and happiness in the United States. *Int J Epidemiol Res*. 2019;6(2):76-82. doi: 10.15171/ijer.2019.13.