

# Subjective financial status and suicidal ideation among American college students: Racial differences

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## Abstract

**Purpose:** The current study aimed to compare American Black and White college students for the protective effect of subjective socioeconomic status (SES) on suicidal ideation.

**Methods:** This study used data from the Healthy Mind Study (HMS 2015-2017). This study included 2,983 undergraduate college students who were at least 18 years of old. These participants were either White (n=2,704) or Black (n=279). The dependent variable was suicidal ideation. The independent variable was subjective SES. Age, gender, transition status, first generation status, and social isolation were covariates. Race/ethnicity was the moderator. Logistic regressions were applied to test the effect of subjective SES on suicidal ideation in the overall sample and by race/ethnicity.

**Results:** In the overall sample, high subjective SES was associated with less suicidal ideation in the pooled sample of college students. A significant interaction was found between race and subjective SES on suicide risk, suggesting a larger protective effect of high subjective SES for Whites than Blacks. In race-stratified models, high subjective SES was associated with less suicidal ideation for White college students but not for Black college students.

**Conclusions:** Consistent with the Minorities' Diminished Returns theory and in line with previous research that has documented worse mental health of high SES Blacks particularly Black men, this study showed that high SES protects White college students but not Black college students against suicidal ideation. While Whites with low SES are protected against risk of suicide, risk of suicidal ideation seems to be constant regardless of SES among Black college students.

**Keywords:** Socioeconomic status, Ethnic health disparities, Race, Ethnicity, Blacks, Suicide, African Americans.

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## Introduction

Although both longitudinal and cross-sectional studies have shown that socioeconomic status (SES) indicators are protective against both undesired physical and mental health outcomes of populations and individuals [1-6], these effects may not be equal across racial groups [7,8]. To give examples, education [9], employment [10], income [11], and marital status [12] generate more health for Whites than Blacks. However, very few studies have tested whether the effects of subjective SES on risk of suicidal ideation are also different by race/ethnicity.

Several SES indicators do not equally protect all demographic sub-groups [7,8,13], including racial and ethnic groups. Sub-populations widely vary in how much they gain health benefits from the very same SES indicator, possibly because SES resources differently impact life conditions across social groups [7,8] particularly based on race/ethnicity [14-16]. According to the Minorities' Diminished Returns theory, the effects of several SES indicators on health outcomes are systemically smaller for the members of the race and ethnic minority group compared to the majority group [7,8,16]. This pattern is robust across SES resources, outcomes, designs, and populations [7,8]. Same patterns can be seen within and across generations [13,17,18].

Education [15], employment [10], income [19], and marital status [12] generate more health gain for Whites than Blacks. However, suicide as an outcome is rarely tested [20].

The diminished returns of SES on mental health in Blacks can have many reasons. One is lower quality education in Black communities [21]. Second is that Black individuals are more likely to be unemployed and work at low paying high stress jobs [10]. Racism that exists in the education system and NS labor market combined with residential segregation [22] can limit returns of SES resources for Blacks [23-25]. Racial pay gap is a well-known phenomenon [24,26]. As a result, the very same SES will provide more mental [11,27] and physical [28-30] health benefits for Whites than Blacks. Given the structural factors such as segregation, education and income have smaller real effects on the purchasing power of Blacks than Whites [7,8]. As a result, education better brings White families than Black families out of poverty [31]. This is because the very same educational attainment generates more economic returns for White than Black families [32].

A major mechanism by which SES impacts mental health is through emotion regulation and impulse control [33]. However, SES has a larger effect on impulse for Whites than Blacks [17].

As a result, the magnitude of the effects of SES on health is systemic diminished for Blacks than Whites, thus high-SES Blacks still report poor outcomes. This is supported by studies that have documented higher risk of depression [14,34], depressive symptoms [15] and suicidal ideation [20] among high-SES Black individuals.

## Aim

Current study compared White and Black college students for the effects of subjective SES on suicidal ideation.

## Methods

### Design and setting

Healthy Mind Study (HMS 2015-2017) is an online mental health survey of American college students in the US. The HMS is a web-based survey that assesses mental health and well-being of students in colleges and universities, mental health, stigma, and service use. Since 2007, HMS has collected data on more than 175,000 respondents from 150 college campuses.

### Ethics

The HMS protocol received Institutional Review Board (IRB) approval from the University of Michigan (U of M). The study also increased the confidentiality of its participants through a Certificate of Confidentiality that was received from the National Institutes of Health (NIH). All participants signed consent.

### Sampling and participants

Colleges that participated in the HMS provided the HMS study with a random sample of their enrolled adult (age 18+ years) students. While large colleges provided 4000 enrolled students, smaller colleges provided all of their enrolled students.

### Analytical sample

Current analysis only included undergraduate, White or Black, domestic students who had not identified as sexual minority (LGBT). Although HMS has sampled both undergraduates and graduate students, this analysis only included undergraduates. The study included 2,983 undergraduate college students who were either White (n=2,704) or Black (n=279).

### Data collection

The HMS variables in this analysis included: race, ethnicity, gender, age, subjective SES, years in the program, transfer status, social isolation, and suicidal ideation.

## Race

Race was self-identified as Black/African American versus White [referent group].

## Ethnicity

Ethnicity was self-identified as Hispanics/Latino non-Hispanic.

## Suicidality

Suicidal ideation was measured using the following three items: 1) "In the past year, did you ever seriously think about committing suicide?", 2) "In the past year, did you make a plan for committing suicide?", and 3) "In the past year, did you attempt suicide?" The questions two and third were only asked from responses who answered yes to the first question. These items measured suicidal ideation, suicidal plan, and suicidal attempt in the National Comorbidity Survey (NCS). These items were on a yes/no response scale [35].

## Data analysis

We used the Stata 13.0 (Stata Corp., College Station, TX, USA) was used for data analysis. For descriptive purposes, we reported proportions (%) and means. For multivariable analysis, we ran a four logistic regression models. In all these models, suicidal ideation was the dependent variable, subjective SES was the independent variable, and age, gender, ethnicity, years in the program, transfer status, and social isolation were the covariates. In the first model, only main effects of subjective SES, race, and covariates were entered. The second model included race × subjective SES interaction term. The third and fourth models were stratified models in White and Black college students, respectively. Odds Ratio (OR), 95% Confidence Interval (CI), and p were reported.

## Results

This analysis included 2,983 undergraduate college students who were at least 18 years of old. These participants were either White (n=2,704) or Black (n=279). The sample was predominantly female. Table 1 shows the summary of the descriptive statistics overall and also by race. Compared to White students, Black students were older, had lower subjective SES, and had lower perceived social isolation. Black students had slightly lower odds of suicidal ideation.

Table 2 shows the results of the two logistic regression models in the overall sample. Model 1 did not have the interaction,

Table 1. Descriptive statistics overall and by race.

	All			Whites			Blacks					
	Mean	SE	95% CI	Mean	SE	95% CI	Mean	SE	95% CI			
Age	20.73	0.31	20.11	21.34	20.68	0.28	20.13	21.24	21.67	1.19	19.27	24.06
Subjective SES	2.72	0.08	2.57	2.87	2.74	0.07	2.61	2.88	2.23	0.36	1.51	2.94
Years in Program	2.58	0.17	2.24	2.92	2.58	0.18	2.22	2.93	2.66	0.22	2.23	3.10
Social Isolation	8.96	0.32	8.33	9.60	9.04	0.31	8.43	9.65	7.46	0.66	6.14	8.78
	%	SE	95% CI	%	SE	95% CI	%	SE	95% CI			
Suicidal Ideation												
No	77.96	0.01	74.99	80.67	77.64	0.01	74.64	80.37	81.12	0.04	71.65	87.95
Yes	22.04	0.01	19.33	25.01	22.36	0.01	19.63	25.36	18.88	0.04	12.05	28.35

**Table 2.** Logistic regressions overall.

	OR	SE	95% CI		t	p
<b>Model 1</b>						
Race (blacks)	0.69	0.35	0.25	1.92	-0.72	0.474
Ethnicity (Hispanics)	1.69	0.86	0.61	4.67	1.03	0.307
Age	0.93	0.05	0.84	1.03	-1.39	0.17
Gender (Female)	1.90	1.13	0.58	6.26	1.09	0.282
Subjective SES	0.64	0.13	0.42	0.97	-2.17	0.034
First Generation	0.82	0.22	0.47	1.42	-0.74	0.463
Years in program	1.04	0.15	0.78	1.40	0.29	0.77
Social Isolation	1.03	0.05	0.94	1.13	0.63	0.531
Intercept	1.52	1.83	0.14	17.01	0.35	0.731
<b>Model 2</b>						
Race (blacks)	0.12	0.14	0.01	1.29	-1.79	0.079
Ethnicity (Hispanics)	1.71	0.86	0.62	4.70	1.07	0.292
Age	0.93	0.05	0.83	1.04	-1.26	0.214
Gender (Female)	1.89	1.13	0.57	6.30	1.07	0.291
Subjective SES	0.62	0.13	0.40	0.96	-2.22	0.031
First Generation	0.82	0.23	0.47	1.43	-0.72	0.474
Years in program	1.05	0.15	0.78	1.40	0.32	0.748
Social Isolation	1.03	0.05	0.94	1.13	0.62	0.537
Subjective SES	2.18	0.73	1.12	4.25	2.35	0.023
Intercept	1.56	1.95	0.13	19.10	0.36	0.722

and Model 2 had race by subjective SES interaction. Model 1 showed that in the pooled sample, high subjective SES had a significant association with lower odds of suicidal ideation (OR=0.64,  $p=0.034$ ). Model 2 showed a significant interaction between race and subjective SES on suicidal ideation (OR=2.18,  $p=0.023$ ), suggesting a weaker protective effect between subjective SES on suicidal ideation for Black compared to White college students.

## Discussion

In line with the Minorities' Diminished Returns theory [7,8], I found support for racial differences in the association between subjective SES and suicidal ideation. Black students were found to be at a relative disadvantage compared to White students regarding receiving mental health gain from their subjective SES.

This is not the first study to document racial differences in the mental health effects of SES indicators [15,36-39]. It is, however, one of the first studies documenting the same pattern for suicidal ideation as the outcome [40-44]. While we know more about diminished returns of SES for physical health outcomes [40-44] as well as anxiety [12] and depression [7,8], less is known about these processes for suicide [20], particularly for college students. Most papers on the Minorities' Diminished Returns theory is written on general population in the community setting. The consistency and robustness of these findings are shown as the very same pattern holds regardless of resource, outcome, setting, and population [7,8].

Minorities' Diminished Returns theory has provided more than

enough evidence on smaller health returns of SES resources for Blacks and other minority populations than Whites [7,8]. Although most of the literature on Minorities' Diminished Returns theory is on physical health outcomes [9,10,16,19], a growing literature is showing the same patterns for mental health outcomes [11,21,45,46]. These diminished returns are not only seen for economic resources, but also for psychological assets [47-57]. Similarly, studies have shown smaller effects of SES on drinking and smoking for Blacks compared to Whites [16,46]. These patterns are shown for Blacks [16,46] as, Hispanics [58] and even homosexual individuals [59]. So, it seems that any social identity that stigmatizes people may reduce the health gains of SES indicators.

Our finding that high SES has a protective effect against suicide among White but not Black college students, does not suggest that Blacks and Whites are innately different in their abilities to use their economic and SES resources. The results also do not suggest that Whites are innately more efficient than Blacks in using their SES resources. These differences are not innate but socially constructed. In the US context, Black families pay higher social and psychological costs for their upward social mobility than White families [34,60-78]. Upward social mobility, being more taxing for Blacks, increases mental health risk of high SES Black people [11,15,45,36-39,79-96].

## Conclusion

In conclusion, race alters the association between subjective SES and suicidal ideation in a national sample of college students in the US. The effect of race on suicide is not only

a result of SES but also due to the differential mental health gains that follow SES. This may be due to society's differential treatment of people due to their race and skin color. In US, race is a proxy of people's access to the opportunity structure and what they can realistically gain from their SES.

### Conflict of Interest

The authors declare no conflict of interest.

### Authors' Contribution

The paper has one author.

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