



DiscoverArchive

Retrieved from DiscoverArchive,
Vanderbilt University's Institutional Repository

This work was originally published in Hersch, J. (2006).
Skin-Tone effects among African Americans: Perceptions
and reality. *The American Economic Review*, 96(2),
251-255.

Copyright © 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005,
2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
by the American Economic Association.

Skin-Tone Effects among African Americans: Perceptions and Reality

By JONI HERSCH*

There are considerable racial disparities in economic outcomes and health, as well as evidence that these effects of race differ by skin tone, with darker skin tone being associated with inferior economic outcomes and higher blood pressure. Using data from three sources, I find consistent evidence that African Americans with lighter skin tone have higher educational attainment than those with darker skin tone, with some, but limited, evidence that the racial difference in wages is attenuated by lighter skin tone. I explore explanations for these findings, considering the influence of possible measurement error, perceived attractiveness, access to integrated schools or work groups, perceived discrimination, and genetic differences. The perception that there is differential treatment on the basis of skin tone is more pronounced than the observed disparities.

I. Datasets and Background Statistics

I examine data from the National Survey of Black Americans (NSBA), 1979–1980; the Multi-City Study of Urban Inequality (MCSUI), 1992–1994; and the 1995 Detroit Area Study (DAS).¹ In each dataset, interviewers reported respondents' skin tone in five or three categories. Both the NSBA and MCSUI provide information on education, childhood background, and labor market characteristics. The DAS does not include information on earnings but includes a series of questions about perceptions of treatment not available in other datasets. In addition, respondents to the DAS self-reported their skin tone, uniquely allowing corroboration with interviewer reports.

* Harvard Law School, 1545 Massachusetts Avenue, Cambridge, MA 02138 (e-mail: jhersch@law.harvard.edu).

¹ Arthur H. Goldsmith et al. (2005) have used both the NSBA and the MCSUI to examine the effect of skin tone on wages among males.

Table 1 provides average values of education, hourly wage, and employment status using the NSBA and the MCSUI. Lighter skin tone is clearly associated with higher employment rates for women and higher educational attainment for both women and men. The employment rate for women with very dark skin tone in the NSBA is strikingly lower than for women with lighter skin tone.

In contrast, evidence that skin tone affects wages is limited. For both sexes, in both datasets, those in the light category have the highest average hourly wage, but this value is significantly different from those with darker skin only for men in the NSBA. Furthermore, the pattern for women based on the MCSUI does not show an increasing wage from darker to lighter skin tone, but instead shows that women in the medium-skin-tone category have the lowest average wage.

II. Education and Wage Regressions

To control for factors other than skin tone which may affect education and wages, I estimate education and wage regressions by gender, using the NSBA and MCSUI. The NSBA is comprised of black respondents only, so black/white comparisons cannot be made. I include in the MCSUI analyses only those respondents who were non-Hispanic black, or white, thus removing from the sample those reported as any other category (mainly Hispanic and Asian). Both datasets have information on parents' education as well as other characteristics that influence educational attainment, such as residential characteristics when growing up. All equations control for cohorts in 10-year intervals. Those reported living mainly outside of the United States are excluded from the years-of-education analyses, as are those who are under the age of 18, over the age of 65, or missing information on variables included in the equations.

TABLE 1—EDUCATION, WAGE, AND EMPLOYMENT STATUS BY SKIN TONE CATEGORY

	Very dark	Dark	Medium	Light	Notes*
Panel A: National Survey of Black Americans (NSBA)					
Female					
Education (years)	10.44	10.95	11.52	12.17	b, c, d, e, f
Hourly wage (\$1994)	8.96	8.55	9.29	9.69	
Employed if age 18–65	43.75	58.92	61.71	64.56	a, b, c
Male					
Education (years)	11.14	11.18	11.75	12.41	c, e
Hourly wage (\$1994)	11.29	11.62	11.55	13.97	e, f
Employed if age 18–65	77.61	77.57	79.32	78.89	
Panel B: Multi-City Study of Urban Inequality (MCSUI)					
Female					
Education (years)		12.53	12.79	13.24	d, e, f
Hourly wage (\$1994)		10.16	9.71	10.55	
Employed if age 18–65		50.29	56.82	58.44	d, e
Male					
Education (years)		12.45	13.13	13.23	d, e
Hourly wage (\$1994)		11.11	11.72	12.44	
Employed if age 18–65		64.49	69.57	69.89	

* Significant differences in means of skin tone categories at the 10-percent level based on Bonferroni multiple comparison test, where “a” compares very dark to dark; “b” compares very dark to medium; “c” compares very dark to light; “d” compares dark to medium; “e” compares dark to light; and “f” compares medium to light.

The wage equations are estimated using a conventional log-wage specification augmented by measures of skin tone. I exclude the self-employed from the wage analyses and control for education, tenure, an approximation of actual work experience, whether the job is covered by union contract, whether the worker is a government employee, and marital status. In the equations using the NSBA, I include indicators for residence in the South or an urban area; using the MCSUI, I include indicators for city.

Table 2 reports the coefficients of skin tone for the education and wage regressions, estimated separately by gender and dataset.² The pattern of effects is similar to the unadjusted averages reported in Table 1. Those with darker skin color attain significantly less education than those with lighter skin color. Adjustment for characteristics such as parents’ education cuts the magnitude of the disparity by up to half. There is a clear pattern, with the educational attainment penalty being smaller as skin tone

lightens, although the coefficients are not always significantly different from the coefficient in adjacent skin tone groups.

The wage equations, likewise, show a pattern similar to those indicated by the unadjusted averages of Table 1. Using NSBA data, there is an earnings penalty of about 20 percent for all men with darker skin tone relative to men with light or very light skin tone, although there are no significant differences in the magnitude of the disparity within the darker skin tone categories. Data from the MCSUI show that women with medium skin tone face a wage penalty relative to women with light skin tone. The wage regressions do not, however, show the pattern of advantage as skin tone lightens observed in the education regressions.

III. Possible Mechanisms

The preceding results indicate that there is a consistent effect of skin tone on educational attainment, with suggestive, but less consistent, support for an effect of skin tone on wages. I explore possible mechanisms by which skin tone differences may influence economic outcomes.

² Complete results available from the author upon request.

TABLE 2—SKIN-TONE EFFECTS ON EDUCATIONAL ATTAINMENT AND WAGE

	Dependent variable:			
	Education		Ln(wage)	
	Female	Male	Female	Male
Panel A: National Survey of Black Americans (NSBA)				
Very dark	-1.156** (0.328)	-1.065* (0.441)	0.059 (0.069)	-0.214** (0.079)
Dark	-0.534* (0.228)	-0.793* (0.345)	0.014 (0.042)	-0.175** (0.063)
Medium	-0.403+ (0.206)	-0.476 (0.335)	0.038 (0.038)	-0.207** (0.061)
<i>N</i>	1047	637	473	366
<i>p</i> -value ^a				
Very dark = dark	0.05	0.47	0.50	0.55
Very dark = medium	0.01	0.10	0.74	0.91
Dark = medium	0.47	0.19	0.49	0.45
Panel B: Multi-City Study of Urban Inequality (MCSUI)				
Dark	-0.403* (0.171)	-0.968** (0.204)	-0.146** (0.027)	-0.206** (0.032)
Medium	-0.267 (0.163)	-0.507** (0.178)	-0.172** (0.026)	-0.185** (0.035)
Light	0.092 (0.178)	-0.424+ (0.224)	-0.113** (0.038)	-0.146** (0.056)
<i>N</i>	2682	1729	1724	1161
<i>p</i> -value ^a				
Dark = medium	0.07	0.00	0.39	0.55
Medium = light	0.00	0.67	0.05	0.54
Dark = light	0.00	0.00	0.22	0.31

Notes: +, *, ** significantly different from 0 at the 10-percent, 5-percent, and 1-percent level, respectively. Standard errors in parentheses, with standard errors in regressions based on MCSUI adjusted for sample stratification design. See text for additional variables included in equations.

^a *p*-value for tests of hypothesis of equality of coefficients on indicated variables.

Note that measurement error could bias any estimated effects of skin color. In contrast to studies in the medical literature that measure skin color by a reflectance meter, skin tone is reported by interviewer observation in the NSBA and MCSUI. Despite skin tone being reported by trained interviewers, both random and systematic measurement error may be considerable and may bias estimated skin tone effects. Calculations from the DAS show substantial disagreement between self-reports and interviewer reports of skin tone, with a match for only 65 percent of the sample of black respondents. While disagreement is not necessarily identical to measurement error, the disparity does have a large random component, as mismatched respondents were about as likely to be reported by interviewers as darker than as

lighter, relative to self-reports. Evidence from the MCSUI shows that nonblack interviewers systematically reported skin tones of black respondents as darker than did black interviewers (Mark E. Hill, 2002). If lighter-skinned blacks have higher earnings, but are reported as darker, the negative effect of darker skin tone on wages is muted. Regressions using the MCSUI, restricted to the sample in which black respondents were interviewed by black interviewers, suggest such bias is possible, with the estimated negative effect on wages of dark skin 26 percent greater for men than in estimates using the full sample.

A possible explanation for the disparate results for education and wages may lie in differential employment rates on the basis of skin color. Schooling is mandatory up to a certain

TABLE 3—RACIAL ENVIRONMENT AND TREATMENT BY SKIN TONE CATEGORY

	Dark	Medium	Light	Notes*
Panel A: National Survey of Black Americans (NSBA)				
Female				
Attractive—above average	30.1	44.5	55.8	a, b, c
Elementary school all or mostly black	85.3	82.4	74.2	a, b
Neighborhood where grew up all or mostly black	84.2	79.9	76.7	b
Present neighborhood all or mostly black	82.6	77.8	72.2	b
Work group all or mostly black	45.9	44.1	37.6	
Male				
Attractive—above average	33.4	39.3	61.8	b, c
Elementary school all or mostly black	85.9	84.0	81.0	
Neighborhood where grew up all or mostly black	82.6	80.2	80.4	
Present neighborhood all or mostly black	78.9	73.0	68.6	
Work group all or mostly black	43.7	49.4	32.1	c
Panel B: Detroit Area Study (DAS)				
Female				
Attractive—above average	36.3	35.2	50.9	b, c
Work group all or mostly black	51.9	48.1	47.3	
Unfair police treatment	24.2	16.1	23.1	
Treated as not smart	23.3	16.6	13.0	
People act afraid	12.2	10.1	5.6	
Whites treat better due to skin color	8.9	8.2	39.8	b, c
Blacks treat better due to skin color	4.4	8.2	17.0	b, c
Male				
Attractive—above average	40.0	28.3	63.6	b, c
Work group all or mostly black	30.8	32.7	32.0	
Unfair police treatment	60.0	60.9	57.6	
Treated as not smart	16.4	17.8	18.8	
People act afraid	27.3	22.0	12.5	
Whites treat better due to skin color	0.0	13.3	42.4	a, b, c
Blacks treat better due to skin color	1.9	10.9	12.5	

* Significant differences in means of skin tone categories at the 10-percent level based on Bonferroni multiple comparison test where “a” compares dark to medium; “b” compares dark to light; and “c” compares medium to light.

age regardless of skin color. But if those with darker skin color expect any wage offer to fall below their reservation wage, we may find that selection into the labor market on the basis of skin color results in similar wages for all wage earners. The employment rates reported in Table 1 suggest that such selection may occur among women, particularly women with very dark skin color, but is probably not a concern for men, as there are no differences in employment rates for men on the basis of skin color.

For further evidence on how skin tone may matter, Table 3 provides statistics on various characteristics reported in the NSBA or DAS which may be associated with economic outcomes, with access to social capital, or with perceptions of differential treatment on the basis

of race or skin tone. I use three groupings of dark, medium, and light.

One possible explanation for skin tone disparities is that those with lighter skin are considered more attractive, and attractiveness itself is associated with superior economic outcomes (Daniel S. Hamermesh and Jeff E. Biddle, 1994). Data from both the NSBA and the DAS show that interviewers were far more likely to rate those with lighter skin as more attractive than average. Inclusion of this variable in both education and wage equations using the NSBA shows that, although those more attractive have higher education attainment, the effect of skin tone on education is largely unaffected by inclusion of attractiveness in the estimates. Furthermore, attractiveness does not affect wages.

Lighter skin color may influence economic outcomes by providing access to integrated schools or work environments. There is evidence in the NSBA that women with lighter skin were somewhat less likely to have attended predominantly black schools, and that men with lighter skin are less likely to work in a predominantly black work group. If schools with more white students are of better quality, then some of the advantage of lighter skin may arise from access to better quality schools. Inclusion of racial composition of elementary school shows no influence of attending a predominantly black school on educational attainment, however. Jobs with a greater proportion of white workers will pay better, reflecting the widely documented racial pay disparity. Estimates show that wages are lower for those in work groups that are predominantly black, but inclusion of this variable does not change the general findings.

The DAS specifically asks respondents whether they thought their skin shade affected how they were treated by white people and by black people. Those with light skin tone report dramatically better treatment from whites than do blacks with darker skin tone, as well as somewhat better treatment from blacks. Although there is a general perception of differential treatment on the basis of skin tone, respondents do not report specific treatment that varies by skin tone, such as whether they face unfair police treatment, whether they are treated as less smart, or whether people act afraid of

them. It is hard to reconcile such strong perceptions of general preferential treatment with limited evidence of specific treatment differentials documented in this paper.

Looming over questions of all racial disparities is whether these differences are due to genetic factors. Analysis of skin tone differences potentially could resolve this debate, with some researchers arguing that the amount of white ancestry is indexed by skin tone (Richard Lynn, 2002). Race affects wages, but gradation of skin tone generally does not. These results suggest that the proportion of white ancestry is not a dominant factor, so that genetic effects are not important determinants of racial disparities.

REFERENCES

- Goldsmith, Arthur H.; Hamilton, Darrick and Darity, William, Jr.** "From Dark to Light: Skin Color and Wages among African-Americans." Unpublished Paper, 2005.
- Hamermesh, Daniel S. and Biddle, Jeff E.** "Beauty and the Labor Market." *American Economic Review*, 1994, 84(5), pp. 1174-94.
- Hill, Mark E.** "Race of the Interviewer and Perception of Skin Color: Evidence from the Multi-City Study of Urban Inequality." *American Sociological Review*, 2002, 67(1), pp. 99-108.
- Lynn, Richard.** "Skin Color and Intelligence in African Americans." *Population and Environment*, 2002, 23(4), pp. 365-75.

This article has been cited by:

1. James Faught, Margaret Hunter. 2012. Latinos and the Skin Color Paradox. *The Sociological Quarterly* **53**:4, 676-701. [[CrossRef](#)]
2. Andrew M. Francis, Maria Tannuri-Pianto. 2011. The redistributive equity of affirmative action: Exploring the role of race, socioeconomic status, and gender in college admissions. *Economics of Education Review* . [[CrossRef](#)]
3. Joni Hersch. 2011. Skin color, physical appearance, and perceived discriminatory treatment. *Journal of Socio-Economics* . [[CrossRef](#)]
4. Kevin Fiscella, Paul Winters, Dan Tancredi, Peter Franks. 2011. Racial Disparity in Blood Pressure: is Vitamin D a Factor?. *Journal of General Internal Medicine* . [[CrossRef](#)]
5. Eric Primm, Nicole Leeper Piquero, Alex R. Piquero, Robert M. Regoli. 2011. Investigating Customer Racial Discrimination in the Secondary Baseball Card Market*. *Sociological Inquiry* **81**:1, 110-132. [[CrossRef](#)]
6. Vesla M. Weaver. 2011. The Electoral Consequences of Skin Color: The “Hidden” Side of Race in Politics. *Political Behavior* . [[CrossRef](#)]
7. Joni Hersch. 2010. The persistence of skin color discrimination for immigrants. *Social Science Research* . [[CrossRef](#)]
8. Jeremy Freese. 2008. Genetics and the Social Science Explanation of Individual Outcomes. *American Journal of Sociology* **114**:S1, S1-S35. [[CrossRef](#)]
9. Joni Hersch. 2008. Profiling the New Immigrant Worker: The Effects of Skin Color and Height. *Journal of Labor Economics* **26**:2, 345-386. [[CrossRef](#)]