The Effects of Skin Color on Health: Trends from the General Social Survey

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This research analyzes whether persons with darker skin tones have poorer health than those with lighter skin tones. Previous studies have shown consistent links between overall racism and poorer health outcomes. Few studies, however, have explored links between skin tone and health status. Interviewer selection of skin tone based on color cards (scale of 1 [lightest]-10[darkest]), self-reported health, and gender data from the General Social Survey (GSS), was used to compare health among varying skin tones of black, white, and other identified participants. 4,343 participant responses were analyzed in Microsoft Excel from three separate years of data (2012, 2014, 2016). T-tests for differences in means in health status were conducted for each gender, race, and skin tone classification. Results show that there are no statistically significant differences in health status by skin tone for most race/gender combinations. However, among white females, those with the lightest skin tones reported better health than those with medium skin tones. Overall, the results do not support the hypothesis that individuals with darker skin have poorer health.

Abstract

Background

- Racism has been linked to poorer health outcomes (Borrell, et al., 2006)
- Accounting for socioeconomic status (SES) and other factors, prior research confirms that racism affects sleep and mental health (Slopen & Williams, 2014) (Williams & Williams, 2000)
- Prior research has also shown an effect of skin tone on social-economic outcomes. Individuals with darker skin tones have poorer educational attainment, lower household incomes, and harsher treatment in the legal system as compared to persons with lighter skin tones (Adams, Kurtz-Costes, & Hoffman, 2016)
- Little is known about the effects of skin tone on intraracial differences in health (Monk, 2015)

Hypothesis

Individuals with darker skin complexions will report lower health outcomes

Methodology

- Skin color is rated on a scale from 1-10 by interviewers using designated color cards. Light has been categorized by those rated 1-3, medium 4-7, and dark 8-10
- Measures of health, skin tone, sex, and race came from the 2012, 2014, and 2016 General Social Survey (GSS) microdata which includes 4,343 participants
- Via Microsoft Excel, Student’s t-tests were performed to find the mean differences between health based on race, skin tone, and sex
- After creating a dummy variable for fair and poor health, t-tests were performed to find the mean differences between skin color based on race, sex, and health

Variables

Independent: Skin tone, Gender, Race
Dependent: Self-Reported Health

Results

Note: GSS has a category for ‘other’ races, but results are not shown due to lack of data

<table>
<thead>
<tr>
<th></th>
<th>Black Male</th>
<th>Black Female</th>
<th>White Male</th>
<th>White Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light vs Medium</td>
<td>1.81</td>
<td>0.07</td>
<td>-0.20</td>
<td>0.84</td>
</tr>
<tr>
<td>Medium vs Dark</td>
<td>1.57</td>
<td>0.12</td>
<td>1.52</td>
<td>0.13</td>
</tr>
<tr>
<td>Light vs Dark</td>
<td>0.27</td>
<td>0.79</td>
<td>-1.37</td>
<td>0.17</td>
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</tbody>
</table>

Effects of Skin Tone on Health

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Reported Health</td>
<td>3.06</td>
<td>2.82</td>
<td>3.02</td>
<td>2.78</td>
</tr>
<tr>
<td>Light Skin</td>
<td>2.78</td>
<td>2.63</td>
<td>2.68</td>
<td>2.62</td>
</tr>
<tr>
<td>Medium Skin</td>
<td>2.91</td>
<td>2.65</td>
<td>3.08</td>
<td>2.78</td>
</tr>
<tr>
<td>Dark Skin</td>
<td>3.08</td>
<td>2.85</td>
<td>3.08</td>
<td>2.78</td>
</tr>
</tbody>
</table>

Discussion

- White females with light skin tones self-reported better health than white females with medium skin tones (p < 0.03). Other factors, such as ethnicity, may explain these differences
- At the 5% level of statistical significance, no other comparisons were found to be significant, showing there is no difference in self-reported health outcomes by skin tone, overall
- Self-reported health is not shown to be affected by skin tone

Future Research

- Do age, region, or other factors play a role in the outcomes of skin color and health?
- Does belonging to a race surpass the effects of belonging to a certain skin tone?
- Are potential increases in health in darker individuals a result of skin color itself or the protective factors in their environments?

References

Slopen, N., & Williams, D. R. (2014). Discrimination, other psychosocial stressors, and self-reported sleep duration and difficulties. Sleep, 37(11), 1471-156.

Acknowledgments

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