Afrocentric facial features predict experience with discrimination and health among Blacks

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Health Disparities among Blacks


- Blacks with more experience with racial discrimination experience poorer health than their counterparts with less experience with racial discrimination.

Smedley, Stith, & Nelson (2003), Institute of Medicine
Williams & Mohammed (2009), Journal of Behavioral Medicine
To study one possible cause of within-group variation in experience of discrimination: physical appearance.

- Do Blacks experience different amounts of discrimination because of their physical appearance?
- Does this difference in experience of discrimination, in turn, lead to within-group variation in health status among Blacks?
Phenotypes and Experience of Discrimination

- A large literature on impression formation suggests that physical appearance influences interracial bias.

Blacks with strong Afrocentric features are perceived and treated more negatively than Blacks with weak Afrocentric features by Whites.

Fiske, Lin, & Neuberg (1999), The continuum model: Ten years later
Blair, Judd, Sadler, & Jenkins (2002), Journal of Personality and Social Psychology
The Current Study

- Examined how Afrocentric facial features (lip thickness, nose width) are related to experience of discrimination and health.

- Examined whether the relationship between Afrocentric facial features and health is mediated by experience with discrimination.
The Current Study (cont.)

- A secondary analysis of the study in which 153 Black patients completed questionnaires and participated in a video-recorded interaction with primary care physicians in Detroit, Michigan.

<table>
<thead>
<tr>
<th></th>
<th>Black patients (N=153)</th>
<th>Primary care physicians (N=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>$M=43.2\ (SD=13.13)$</td>
<td>$M=31.0\ (SD=3.49)$</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>77.1% women</td>
<td>55.6% women</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td>Black 100%</td>
<td>1 (5.6%)</td>
</tr>
<tr>
<td></td>
<td>Asian --</td>
<td>14 (77.8%)</td>
</tr>
<tr>
<td></td>
<td>White --</td>
<td>3 (16.7%)</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>&lt; $20K 46.6%</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>$20K - &lt; $50K 38.4%</td>
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</tr>
<tr>
<td></td>
<td>&gt; $50K 15.1%</td>
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</tbody>
</table>
The Current Study (cont.)

- Assessed patients’:
  - Afrocentric facial features
    - Strength
    - Congruency
  - Experience with discrimination
  - Health status
    - Self-reported physical health
    - Self-reported mental health
    - Blind chart review
Different Predictions for the Two Measures of Afrocentric Facial Features

- **Strength:**
  - The stronger the two facial phenotypes (thicker lips & wider nose), the more experience with discrimination and the poorer health.

- **Congruency:**
  - The more congruent the two facial phenotypes (thicker lips with wider nose, thinner lips with narrower nose), the more experience with discrimination and the poorer health.
# Results: Correlations

<table>
<thead>
<tr>
<th></th>
<th>Correlation</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>Strength</td>
<td>Congruency</td>
</tr>
<tr>
<td>Experience with discrimination</td>
<td>1.28</td>
<td>1.47</td>
<td>0.02</td>
<td>0.26**</td>
</tr>
<tr>
<td>Self-reported physical health</td>
<td>14.77</td>
<td>4.57</td>
<td>0.14</td>
<td>-0.22*</td>
</tr>
<tr>
<td>Self-reported mental health</td>
<td>9.76</td>
<td>3.24</td>
<td>0.05</td>
<td>-0.20†</td>
</tr>
<tr>
<td>The number of chronic illness</td>
<td>0.54</td>
<td>0.78</td>
<td>-0.13</td>
<td>0.23*</td>
</tr>
</tbody>
</table>

*Note.* Strength $M = 0.0003$ ($SD = 0.72$); Congruency $M = 0.03$ ($SD = 1.47$).

† indicates $p < .10$, * indicates $p < .05$, and ** indicates $p < .01$
Preliminary Results: Experience of Discrimination as a Mediator

Experience with discrimination

The a*b path: $p = 0.05$

Congruency of AFF

c’ = 0.14 (c = 0.32*)

The number of chronic illness

Experience with discrimination

The a*b path: $p = 0.08$

Congruency of AFF

c’ = -0.65 (c = -0.91*)

Self-reported physical health

Experience with discrimination

The a*b path: $p < 0.01$

Congruency of AFF

c’ = -0.43 (c = -0.67*)

Self-reported mental health

Experience with discrimination

Note. “Age” was entered as a covariate in all analyses.
Summary and Conclusions

- Afrocentric facial features influence experiences with discrimination among Blacks.

- Specifically, congruency between two facial phenotypes (lips, nose) plays an important role.
  - Blacks with more congruency between lip thickness and nose width experience more discrimination than Blacks with less congruency between the two.

- Experience of discrimination, in turn, predicts health status.
  - Blacks with more experience of discrimination suffer from poorer health than Blacks with less experience of discrimination.
Summary and Conclusions (cont.)

- Blacks with Black phenotypes may be discriminated against by Whites, whereas Blacks with White phenotypes may be discriminated against by fellow Blacks (especially those living in highly racially segregated areas).

- Blacks with incongruent facial phenotypes may fare better because both Blacks and Whites can find a feature that lessens negativity associated with the other feature.

- Interventions should recognize that Blacks are not an homogenous group and study within-group variability in discrimination and health.
Future Directions

- Investigate the underlying mechanisms through which Afrocentric facial features influence discrimination and health among Blacks.
  - Its effects on patients’ and physicians’ racial attitudes?
  - Its effects on the quality of medical interactions?

- Investigate how other phenotypes (e.g., skin tone, hair texture) interact with Afrocentric facial features.
Acknowledgement

- Norbert Kerr, Ph.D.
- Susan Eggly, Ph.D.

- NICHD 1R21HD050445001A1 (PI: Penner)
- NCI 1U54CA154606-01 (PI: Albrecht)
Measures

- Afrocentric facial features: objective measures of lip thickness and nose width.

- 1: face length
- 2: face width
- 3: lip thickness
- 4: nose width

Lip Ratio = 3 / 1
Nose Ratio = 4 / 2
Measures (cont.)

- **Experience with discrimination**: Modified version of Self-Perceived Racial and Ethnic Discrimination. (Brown, 2001)

- **Self-reported physical health**: General health subscales taken from the RAND 20-Item Short Form Health Survey (SF-20). (Ware, Sherbourne, & Davies, 1992)

- **Self-reported mental health**: 1-item depression subscale taken from the SF-20.

- **Diagnosed physical health**: The number of controllable chronic diseases taken from medical charts.