Decision Biases, Implicit (Nonconscious) Stereotypes, and Strategies for Managing Them

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Implicit Bias Predicts

• Nonverbal negativity toward Black (vs. White)
  – Fazio et al.; Dovidio et al.; McConnell & Leibold

• Attributions of hostility to Black faces (vs. White)
  – Hugenberg & Bodenhausen
Racial Difference in Treatment

- Public Health Data
  - Institute of Medicine

- Experimental Data
  - Schulman et al.
Accounting for Treatment Difference

- Socioeconomic factors
- Access to care
- Physician bias?
Goal

- Physician bias predicts treatment decision
Physicians

- Internal and emergency medicine physicians
  - $N = 302$
  - 2 states (MA and GA)

- Tested on password-protected experiment site
Procedure

- Vignette
- Treatment decision
- Explicit & implicit bias (counterbalanced)
Mr. Thompson is a 50-year-old male… history of hypertension and smoking…no other risk factors for CAD…came to emergency room with chest pain…appears to be in a lot of pain—“sharp, like being stabbed with a knife” and pointing to the mid sternum…has had it 3 hours…now an 8 out of 10 in intensity…his vital signs, oxygen saturation, and physical exam are normal…EKG shows some slight abnormalities but no prior EKG for comparison…and there is no time for cardiac enzymes. You do not have access to a cardiac catheterization lab. He has no absolute contraindications to thrombolysis.
Mr. Thompson is a 50-year-old male ... history of hypertension and smoking...no other risk factors for CAD...came to emergency room with chest pain...appears to be in a lot of pain– “sharp, like being stabbed with a knife” and pointing to the mid sternum...has had it 3 hours...now an 8 out of 10 in intensity...his vital signs, oxygen saturation, and physical exam are normal...EKG shows some slight abnormalities but no prior EKG for comparison...and there is no time for cardiac enzymes. You do not have access to a cardiac catheterization lab. He has no absolute contraindications to thrombolysis.
Treatment

Given the limited information available, would you recommend thrombolysis for this patient?

_____NO
_____YES
Explicit & Implicit Racial Bias

• Negative attitude
Results

- 67 physicians reported awareness of study purpose
Results: Explicit & Implicit Bias

Explicit

Implicit

Cohen's d
Implicit Racial Bias Predicts Differential Treatment

- Low Implicit Bias
  - White: 1.0
  - Black: .75

- High Implicit Bias
  - White: .50
  - Black: .50

The graph shows that as implicit bias increases, the likelihood of differential treatment decreases.
Implicit Racial Bias Predicts Differential Treatment

![Graph showing the relationship between Implicit Bias and Treatment]

- **White**: B = 0.17^*
- **Black**

Where:
- **Treatment**: YES, NO
- **Implicit Bias**: Low, High
Implicit Racial Bias Predicts Differential Treatment

Negative Attitude IAT ($p < .009$)

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Implicit Bias</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>$B = .17^*$</td>
</tr>
<tr>
<td>YES</td>
<td>$B = -.19^*$</td>
</tr>
</tbody>
</table>

White

Black
Additional Results: Analysis

- Recall that 67 Ss reported awareness
- Awareness of study’s purpose → overcorrection effects
Overcorrection
Overcorrection

Unaware

Aware

Low

High

Implicit Bias

Treatment

NO

YES

B = -.19*

Unaware

Aware
Overcorrection

Awareness x implicit on treatment ($p < .001$)
Summary

• In a rapid judgment context, physician bias influenced medical decision-making

• Physician rationality no less bounded

• Awareness led to overcorrection
Location of Bias in Decision(s)

- SEE PATIENT
- EXAMINATION
- DIAGNOSIS
- DECISION(S)
- RECOMMENDATION
Location of Bias in Decision(s)

- See Patient
- Examination
- Diagnosis
- Decision(s)
- Recommendation

Affect

Compliance

Stereotype
Bottom Line

- Implicit racial bias predicted important treatment decision in a rapid judgment context
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