The Science of Unconscious Bias: Exploring the Evidence

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Social Cognition: How We Understand the Social World

Two levels of cognition: Explicit and implicit attitudes and beliefs

- Explicit refers to attitudes and beliefs we know we have and report
  - Deliberate - verbal behavior

- Implicit refers to attitudes that are not readily apparent to the individual, more automatic, unconscious, we are unaware
  - Automatic - non-verbal behavior
Unconscious Attitudes and Behavior

- Prejudiced behavior may occur automatically and unintentionally, even among well-intentioned, and the person is unaware (Dovidio, Gaertner & Kawakami, 2002; Devine & Monteith, 1999)

- Implicit and explicit attitudes in socially sensitive areas often disagree (Nosek, 2007, many other studies)
A widely used, indirect measure of implicit social cognition (unconscious attitudes)

Sort and pair images and words as they flash on a computer screen

Based on the assumption that response to images that are more easily associated will be faster than response to images that are less easily associated

Resistant to social desirability

Measuring Unconscious Bias: the Implicit Association Test (IAT)

(Greenwald, et al., 1998)
Unconscious Bias is Common
(Nosek, et al, 2007)

• Implicit associations are common and pervasive in the general population (data on 10m)

• > 70% of the millions of Race IAT test takers show some level of an implicit preference for White Americans vs. Black Americans (implicit pro-White bias)

• This trend is found for other social biases such as gender, weight, ability, age, other areas

This phenomenon was popularized in Malcolm Gladwell’s book “Blink”
Implicit Attitude Measures and Behavior

A meta-analysis of 122 studies of IAT- behavior correlations, found that IAT measures of implicit attitudes are a better predictor of behavior than are self-reported attitudes in socially sensitive areas.

However, the IAT is not diagnostic. Does not determine whether an individual will discriminate.

Effects of Unconscious Bias?

- Clinical (health care disparities)
- Hiring (affects diversity)
- Promotion (career advancement)
- Curriculum design/content (what is left out?)
- Admissions (diversity)
- Committee assignments (organizational decisions and policy)
- Grant review process
- Peer review decisions
Unconscious Bias and Career Decisions

- Identical resumes, name manipulated tradition African American, traditional white name- only difference is name
- White name 50% greater chance of receiving call back than Black name
- Higher quality resumes received 30% call back for White candidate and 9% for the Black candidate
- Employers who listed “equal opportunity employer” had same amount of bias
- Subtle manipulation, likely unconscious bias

(Bertrand & Mullainathan, 2003)
IAT and Health Disparities Research

Green, et al., 2007
- Physicians hold strong implicit attitudes favoring White Americans vs. Black Americans
- An implicit association with Black patients as being “less cooperative” than White patients
- Stronger pro-White bias- Black patients less likely to receive treatment

Sabin et al., 2008
- Pediatricians hold less pro-White bias than other MDs, and others
- Implicit association with White rather than Black patients and patient compliance
- No relationship to difference between best and “good enough” care by patient race
Unconscious Bias in Health Care Research

Sabin, Nosek, Greenwald, Rivara, 2009- Race IAT
  • Respondents dropped in to Project Implicit public web site N= 404, 277, MD N=2535
  • Physicians, on average, do not report strong explicit racial bias
  • Physicians hold strong pro-White implicit bias (White relative to Black)
  • African American physicians show no bias
  • Physicians are similar to others in society
  • Sabin, Greenwald, 2012
    • Implicit race bias associated with different prescribing patterns (pain medication) for Black and White child
    • As physician implicit race bias increased, prescribing narcotic pain medication decreased for Black patient
Implicit Attitudes and Patient Care

Cooper, Roter, Carson, Beach, Sabin, Greenwald, Inui, 2012

- Real world clinic visits, 269 patients, Baltimore
- Stronger clinician implicit pro-White race bias: less confidence in clinician, less perceived physician respect and liking, more physician verbal dominance
- Stronger implicit pro-White medical compliance stereotype: patients report less confidence in physician, less trust
- Physicians more patient-centered with White patients than Black patients
Does Self-Awareness Motivate Behavior Change?

- Inducing low prejudiced individuals to become aware of the difference between their egalitarian values and their implicit attitudes can produce emotional reactions which then motivate behavior change through self-regulation (Dovidio, Kawakami, Gaertner, 2000)

- Developing awareness of unconscious bias is a developmental process, takes time, reflection, understanding (Teal, et al., 2012)
Pause to Take the IAT

Weight IAT
Race IAT
Age IAT
Design and evaluate an online CME

- Module 1: Present the evidence of healthcare disparities
- Module 2: Present the science of unconscious bias and the IAT experience with feedback
  - Self awareness of bias
  - Enhance learning
  - Motivate behavior change
- Module 3: Communication skills building
  - Interactive audio/video case studies teach skills, “virtual tutor”
  - Provide opportunities for skills practice via interactive audio recordings
Best Intentions: Curriculum

- MedEd Portal ID# 7792
- Citation, (Gill, A., Thompson, B., Teal, C., Shada, R., Fruge, E. Villareal, G., et al.)
- Course Objectives
  - Acknowledge that bias is inherent in physician’s perspectives
  - Verbalize impact of stereotyping or personal bias on medical decision making
  - Self reflection as method to understand ones own biases
  - List strategies to mitigate physician biases in patient care
AAMC Unconscious Bias in the Search and Recruitment Process

“What do you don’t know: the science of unconscious bias and what to do about it in the search recruitment process”

20 minute video
Managing the Influence of Unconscious Bias on Behavior

Organizational/individual

- Collect data
- Be careful about decisions by “intuition”
- Examine decisions in a systematic way
- Diverse input into decisions
- Use decision tools
- Become aware of biases

(Banaji, Brazerman, Chug, 2003)