

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)

Measuring Unconscious Bias: the Implicit Association Test (IAT)

(Greenwald, et al., 1998)

- 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

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

(Greenwald et al., 2009, Understanding and Using the Implicit Association Test: III. Meta-analysis of Predictive Validity, *Journal of Personality and Social Psychology*)

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 traditional 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

Developing a Racial/Ethnic Healthcare Disparities CME

NIH NIH 5R44MD000589, PI, VanSchaik, Sabin Co-PI

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)