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AMERICAN INTERPROFESSIONAL HEALTH COLLABORATIVE:
TRANSCENDING BOUNDARIES, TRANSFORMING LEARNING

INTERPROFESSIONAL WEBINAR SERIES
A LEADERSHIP DISCUSSION ON INTERPROFESSIONAL EDUCATION

Exploring Implicit Bias in Interprofessional Education and Practice

Thursday, June 18, 2015

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Implicit (Unconscious) Bias in Health Care

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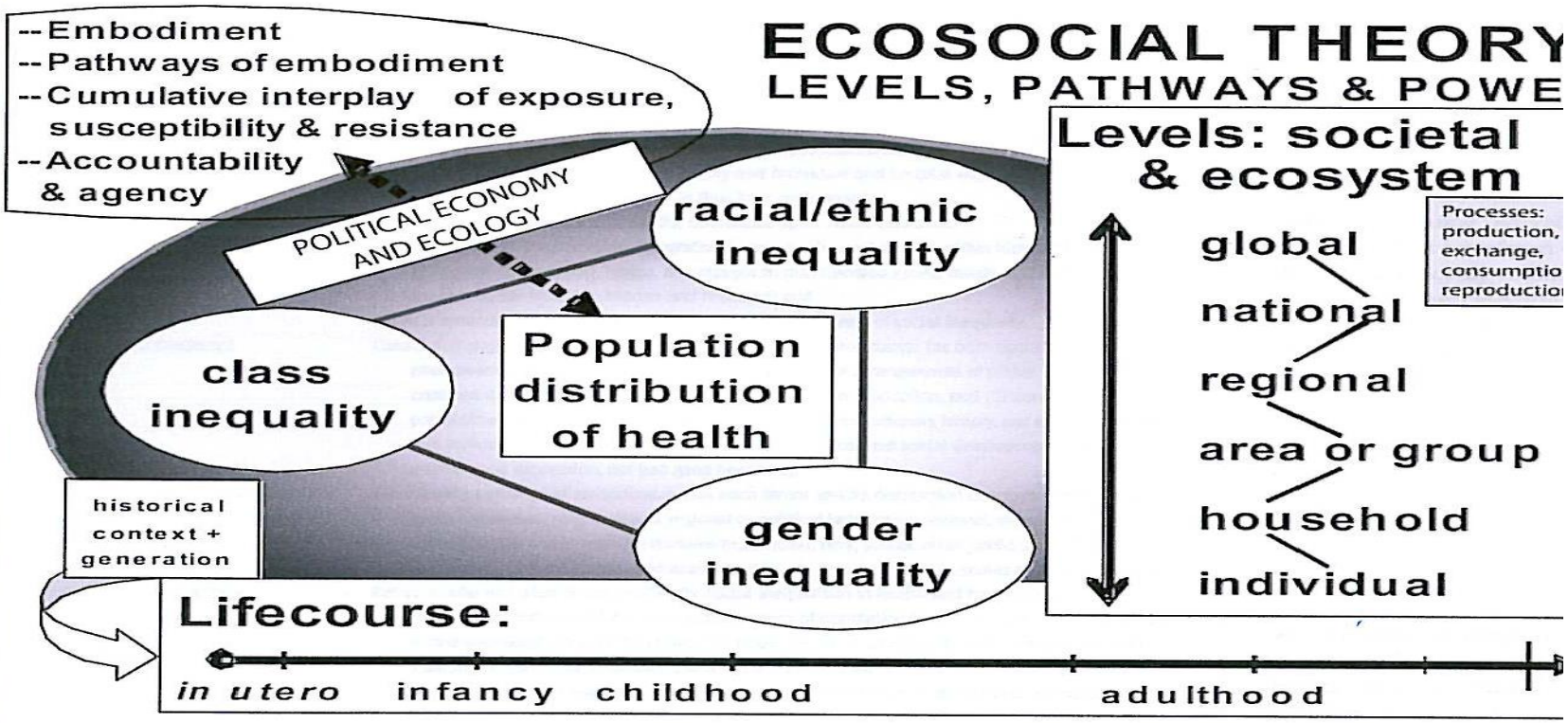
Learning Objectives

- Review the science of implicit social cognition and define implicit associations
- Describe situations in which unconscious bias may affect clinical care
- Identify strategies to minimize the influence of unconscious bias on interactions with patients and other healthcare professionals

Ecosocial Model - Krieger, AJPH, Feb 2008



Note. To explain current and changing population distributions of disease, including health inequities, and who and what is accountable for the societal patterning of health, it is necessary to consider causal pathways operating at multiple levels and spatiotemporal scales, in historical context and as shaped by the societal power relations, material conditions, and social and biologi processes inherent in the political economy and ecology of the populations being analyzed. The embodied consequences of societal and ecologic context are what manifest as population distributions of and inequities in health, disease, and well-being.
Source. See references 1,17–21.

FIGURE 1—A heuristic diagram for guiding ecosocial analyses of disease distribution, population health, and health inequities.

Definition Health Disparities

"Health differences that adversely affect groups of people who have systematically experienced worse health and greater social or economic obstacles to health, based on racial or ethnic group, religion, socioeconomic status, gender, mental or physical disability, sexual orientation, rural residence and other characteristics that have historically been linked to discrimination or having less influence and/or acceptance in society"

www.hrsa.gov

HP2020

Example: US Infant Mortality

US total

- 6.06/1000 live births
- **US # 46th in world,** (range 178.13 Angola # 224 to 1.78 Monaco #1) (CIA Facts)

US by Race/Ethnicity

- White 6.9
- AI/AN Native 8.3
- Puerto Rican 8.3
- US Mexican 5.53
- Black 13.63

Center of Disease Control and Prevention, www.cdc.gov

National Center for Health Statistics

Health Care Disparities

Health care disparities are racial or ethnic "differences in the quality of health care not due to access related factors, or clinical needs, preferences and appropriateness of intervention"

(Institute of Medicine, *Unequal Treatment*, 2003, p. 32)

Health Care Disparities

- Cancer treatment
- Treatment of cardiovascular disease
- Rates of referral for clinical tests
- Placement on kidney transplant wait list
- Black children's receipt of medication
- Amputation
- Diabetes management
- Pain management
- HIV treatment
- Physician communication behaviors
- Physician perceptions of patients
- Other areas

The Science of Implicit Bias (Unconscious, Hidden)

First Impressions

- First impressions of a person as attractive, likeable, competent, trustworthy, and aggressive are made quickly (implicit)
- Exposure to a face for 100ms, or one-tenth of a second, was enough to make an assessment of these traits when viewing an unknown face
- Judgment did not change with increased view time of 1000ms, one second, but confidence in the judgment did increase with additional time

Willis & Todorov, 2006

The Case of "Carla the Quilter"

Banaji & Greenwald, 2013

- Carla, a woman in her late 20s, was rushed to the emergency room by her boyfriend. She had cut her hand on glass bowl as it slipped to the ground and shattered. Her hand was cut from mid-palm to wrist and bleeding. BF told the ED resident that quilting was very important to Carla and worried about damage to her fine motor control.
- Resident stated that he was confident it would heal well if he could "just stitch it up quickly".
- As he prepared Carla's hand, a student volunteer walked by and recognized Carla, who in addition to being a quilter, was also an assistant professor at Yale.
- The ED doctor stopped in his tracks and said, "You are a professor at Yale?"
- Within seconds Carla was on a gurney headed for the surgery department and the best hand surgeon in Connecticut was called in. After hours of surgery Carla's hand was restored to pre-injury function.
- What happened here?

Hidden Bias is Complex

- The case of Carla is a case of subtle discrimination
- We have both "Carla the quilter", and "Carla the Yale professor"
- Carla-as-professor triggered an "in-group bias"
- Carla-the-quilter suddenly became a fellow member of the Yale faculty and qualified for elite care
- Discrimination in the form of "okay care" was not an act of "hurting" a patient but rather and act of "not helping"
- What would have happened if Carla was Carl?

Banaji & Greenwald, 2013

Definition of Terms

- ***Bias:*** an attitude that projects favorable or unfavorable dispositions toward people
- ***Stereotype:*** shared set of beliefs, fixed impression of a group
- ***Prejudice***: negative attitudes and beliefs about out-group vs. in-group
- ***Discrimination:*** behavioral manifestation of bias, stereotyping, and prejudice, the way others are treated
  (Greenwald & Banaji, 1995)
- ***Stigma:*** the process by which certain human characteristics are labeled as socially undesirable and linked with negative stereotypes about a class of individuals, resulting in social distance from or discrimination towards labeled individuals (NIH)

Social Cognition

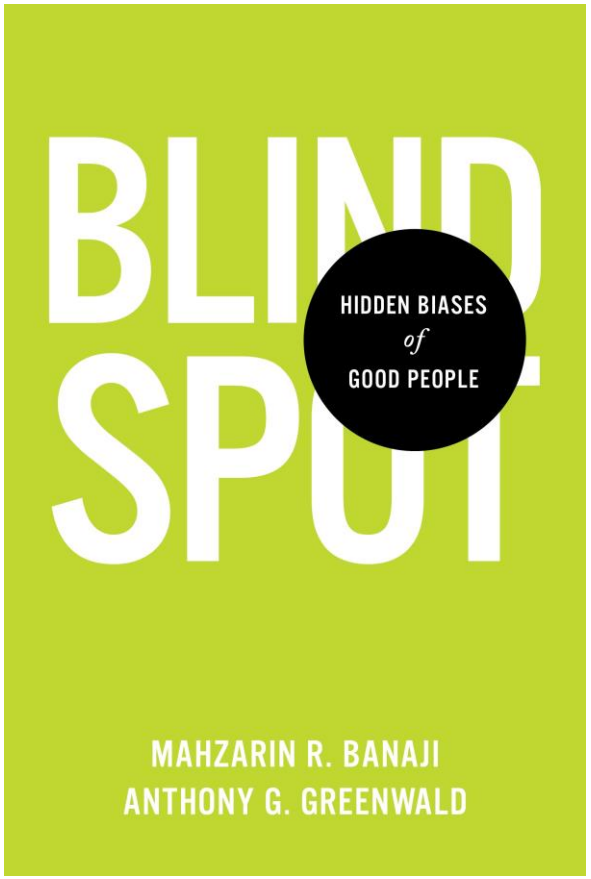
Two levels of cognition:

- ***Explicit*** refers to attitudes and beliefs we know we have and report
- ***Implicit*** refers to attitudes and beliefs that are not readily apparent to the individual, more automatic, unconscious, hidden, we are unaware

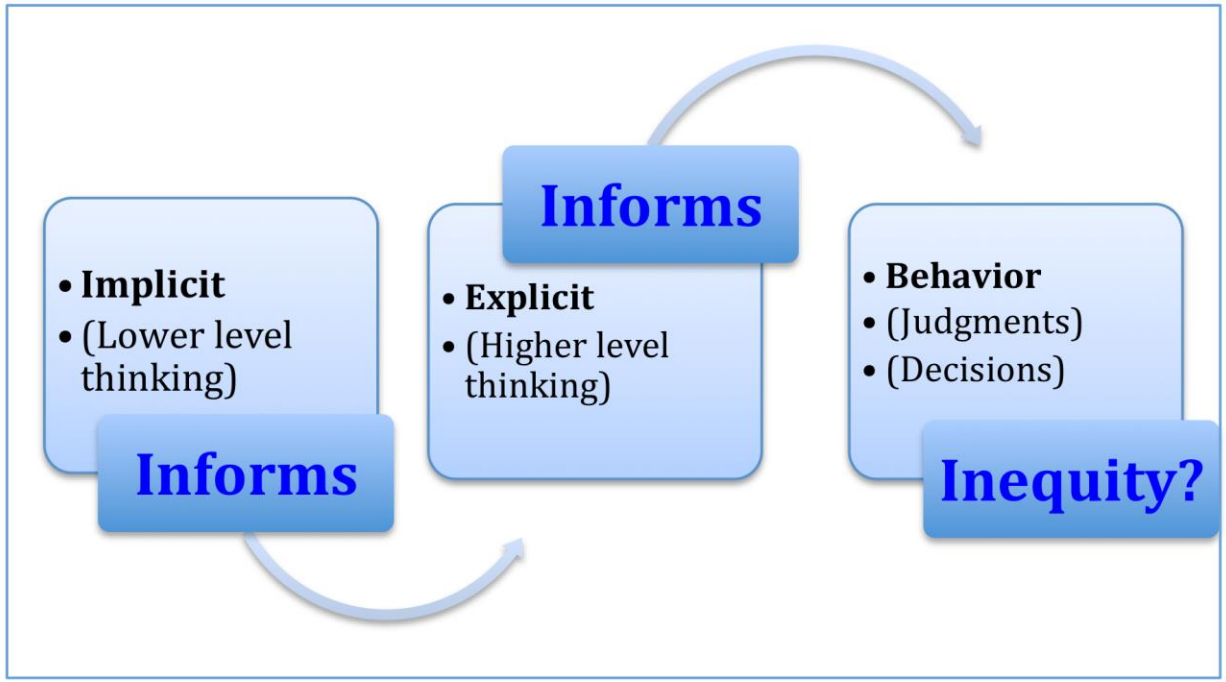
Greenwald, & Banaji, 1995

Blind Spot: The Hidden Biases of Good People

- Reviews the science in lay language
- Implicit bias is common
- "We have discovered that most people find it unbelievable that their behavior can be guided by mental content of which they are unaware."



How Implicit Bias Informs Behavior



Conditions That Produce Cognitive Error

Despite egalitarian beliefs, bias is more likely to affect behavior in certain situations, similar to situations that produce medical and diagnostic error:

- Clinical ambiguity
- Treatment uncertainty
- Heavy workload
- Fatigue
- Pressure of time

Croskerry, 2001, 2010

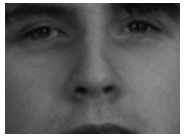
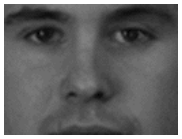
Measuring Unconscious Bias: the Implicit Association Test (IAT)

(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, target category, attribution category
- 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
- Project Implicit **http://implicit.harvard.edu**

Race IAT
Implicit preference for white Americans if:

Response to these pairings is faster…

Pleasant & European American	
gentle	
happy	
smile	
joy	
warmth	
pleasure	
paradise	
rainbow	
	

...than response to these pairings

Pleasant & African American

gentle

happy

smile

joy

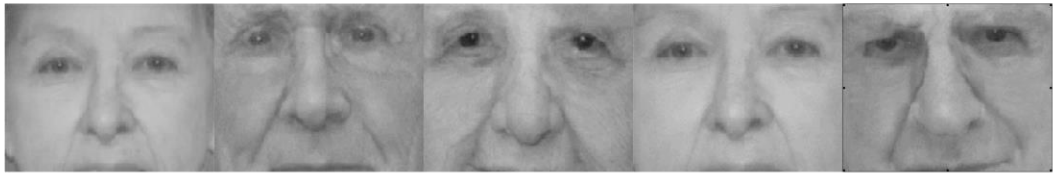
warmth

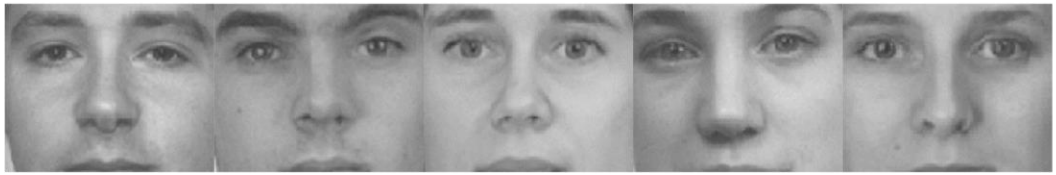
pleasure

paradise

rainbow

AGE IAT





Old versus Young

Good: Joy, Love, Peace, Wonderful, Pleasure, Glorious, Laughter, Happy
Bad: Agony, Terrible, Horrible, Nasty, Evil, Awful, Failure, Hurt

Early Research Implicit Bias: Physicians

- Race/ethnicity bias- black versus white, Latino versus white, Native American versus White American, other
- Weight, age, sexual orientation, gender, social class
- Race/Patient Medical Compliance Stereotype
- Mental illness
- Many of these studies only assess whether bias exists
- The few studies on the association of unconscious bias with clinical behavior- results are mixed
- Few studies measure real-world care

Green, 2007, Sabin, 2009, 2012,Cooper, 2012, Blair, 2014, van Schaik, unpublished

Physician Implicit and Explicit Attitudes About Race

- MDs (N=2535) hold strong implicit pro-white bias
- Similar to others in society (N= 404,277), others with doctoral degrees (except JDs)
- Only African American MDs, on average, showed no race bias
- Self-report of pro-white attitudes weaker than implicit measures

Sabin, Nosek, Greenwald, Rivara, 2009

MD Weight Bias

- N= 359,261, Weight IAT, general population, strong implicit and explicit anti-fat bias, prefer “thin people” rather than “fat people”
- N= 2,284, MDs, found strong implicit and explicit anti-fat bias, prefer “thin people” rather than “fat people”
- Does this bias affect clinical care? We don’t know.

Sabin, Marini, Nosek, 2012

Implicit Bias Pediatricians

Study of pediatricians at one US academic medical center, N= 95, vignette study, 4 common pediatric conditions, not generalizable

- Physician implicit race bias was associated with prescribing pain medication, but was not associated with treatment for ADHD, UTI, or Asthma
- As physician implicit pro-white bias increased, prescribing narcotic pain medication for black patient decreased
- As physician implicit stereotype of a white patient as more medically compliant than a black patient increased, prescribing narcotic pain medication for black patient decreased

Sabin & Greenwald, AJPH, 2012

Implicit Bias in Clinical Interactions

Johns Hopkins Study: **real-world clinic visits**, primary care, 90% physician, 269 patients, 20% black patient-provider concordant, Baltimore

- For Black patients clinician higher implicit race bias associated with:
  - Lower patient positive affect
  - Patients' less liking of the clinician
  - Less confidence in clinician
  - Lower perceived respect from clinician
  - More clinician verbal dominance
- For Black patients clinician higher implicit race/medical compliance stereotype associated with:
  - Longer visits
  - Patients report less confidence and trust in physician
  - Less patient centered with AA patients
  - More patient-centered with white patients

Cooper, Roter, Carson, Beach, Sabin, Greenwald, Inui, 2012. *Implicit Racial Bias among Clinicians, Communication Behaviors, and Patient Ratings of Interpersonal Care*, AJPH

Managing Implicit Bias

- Become aware of own biases
- **Diverse input into decisions**
- Presumptions of patient based upon implicit negative stereotypes
- Feeling more comfortable with and confident in people who share one's own culture
- Positive stereotypes that influence perceptions of patient
- Be careful about decisions by "intuition"
- Objective processes, clinical guidelines, check lists

(Banaji, Brazerman, Chug, 2003, AAMC 2009, Banaji Greenwald, 2013)

Training to Reduce Bias among Health Care Providers

- Become aware of personal biases to motivate change
- Compare what would do versus what should do in intergroup situations, non threatening environment
- Understand the psychological basis for implicit bias
- Build confidence in intergroup interactions
- Strategies of perspective-taking and affective empathy
- Patient centeredness, partner with patients

Burgess, et. al., 2007

Bibliography

- 1. Krieger N. Proximal, distal, and the politics of causation: what's level got to do with it? Am J Public Health 2008;98(2):221-30.
- 2. Smedley BD, Stith AY, Nelson AR. Unequal treatment: Confronting racial and ethnic disparities in health care. Washington, D.C.: National Academy Press; 2003.
- 3. Banaji MR, Greenwald AG. Blindspot: Hidden Biases of Good People. New York: Delacorte Press; 2013.
- 4. Willis J, Todorov A. First impressions: making up your mind after a 100-ms exposure to a face. Psychol Sci 2006;17(7):592-8.
- 5. Greenwald AG, Banaji MR. Implicit social cognition: attitudes, self-esteem, and stereotypes. Psychol Rev 1995;102(1):4-27.
- 6. Croskerry P. Achieving quality in clinical decision-making: Cognitive strategies and detection of bias. Acad Emerg Med 2002; 9(11):1184-1204.
- 7. Croskerry P. To err is human--and let's not forget it. CMAJ 2010;182(5):524.
- 8. Greenwald AG, McGhee DE, Schwartz JL. Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology* 1998;74(6):1464-1480.
- 9. Green AR, Carney DR, Pallin DJ, Ngo LH, Raymond KL, Iezzoni LI, et al. Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. J Gen Intern Med 2007;22(9):1231-8.
- 10. Sabin J, Nosek BA, Greenwald A, Rivara FP. Physicians' implicit and explicit attitudes about race by MD race, ethnicity, and gender. J Health Care Poor Underserved 2009;20(3):896-913.
- 11. Cooper LA, Roter DL, Carson KA, Beach MC, Sabin JA, Greenwald AG, et al. The associations of clinicians' implicit attitudes about race with medical visit communication and patient ratings of interpersonal care. Am J Public Health 2012;102(5):979-87.
- 12. Blair IV, Steiner JF, Hanratty R, Price DW, Fairclough DL, Daugherty SL, et al. An investigation of associations between clinicians' ethnic or racial bias and hypertension treatment, medication adherence and blood pressure control. J Gen Intern Med 2014;29(7):987-95.
- 13. Sabin JA, Marini M, Nosek BA. Implicit and explicit anti-fat bias among a large sample of medical doctors by BMI, race/ethnicity and gender. PLoS One 2012;7(11):e48448.
- 14. Sabin JA, Greenwald AG. The influence of implicit bias on treatment recommendations for 4 common pediatric conditions: pain, urinary tract infection, attention deficit hyperactivity disorder, and asthma. Am J Public Health 2012;102(5):988-95.
- 15. Banaji MR, Brazerman MH, Chugh D. How (un)ethical are you? *Harvard Business Review* 2003;December:56-64.
- 16. Burgess DJ, van Ryn M, J. D, Saha S. Reducing racial bias among health care providers: Lessons from social-cognitive psychology. J Gen Intern Med 2007;22:882-887.

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Thank You!

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Implicit bias in Interprofessional Education and Teams

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Learning Objectives

- Describe potential implicit associations in interprofessional health care and education
- Discuss the impact of bias due to implicit associations
- Present a potential assessment of implicit associations between leadership and physicians contrasted with compassion and collaboration for nurses

Implicit bias and interprofessional teams

- Explicit bias is overtly taught and expressed and is consciously acknowledged
- Implicit associations are developed from experience which is observed, but is usually not overtly taught
- You might call this the hidden lessons of the hidden curriculum
- So what do we observe in healthcare settings?

Manns-James L. Finding what is hidden: a method to measure implicit attitudes for nursing and health-related behaviours. J Adv Nurs. 2015 May;71(5):1005-18.

Possible observations

- Physicians give orders; nurses follow orders
- Nurses spend hours of time with patients; physicians spend minutes with patients **BUT**
- Advanced practice nurses (e.g. nurse practitioners, midwives, anesthetists) write orders
- Advanced practice nurses spend more time than physicians with each patient, but more than RNs
- How might implicit associations formed by and about RNs be generalized to assumptions or biases about and by advanced practice nurses?

Assessing Assumptions/ Associations/ Bias

- 24 advanced practice nursing students were in a year-long seminar course with 170 3rd year medical students
- The students from both professional groups were asked about their own strengths and weaknesses in the Interprofessional Education Collaborative competencies (values/ethics for interprofessional practice, roles/responsibilities, interprofessional communication, and teams and teamwork)
- They were also asked about the relative strengths and challenges for the advanced practice nursing and the medical students

Advanced practice nursing perspective

- The advanced practice nursing students saw nurses as more compassionate and better communicators than doctors in general, and assumed this was also true of the medical students. They were surprised when they found that medical students were different than the doctors with whom they had worked when they were staff nurses.
- The advanced practice nursing students saw the medical students as having better role clarity, and as better leaders, despite the equal roles in the course and very similar roles in the current clinical placements.

Medical student perspective

- The third year medical students in that interprofessional course did not feel they had role clarity at all, and felt they had no autonomy or power in their current roles
- However, they assumed (and said they were taught) that MDs should be the “leader” of the interprofessional team, and felt this was what was modeled
- When in a clinical test scenario with a nurse and a patient, they assumed their job was to give orders, not to share information
- And this was after a year together!

Why does this matter?

- As Dr. Sabin has pointed out:
- Bias that changes our expectations of others makes it more difficult to see what is really there, or to see it as an “exception” which does not change our thinking
- The more implicit that bias, the more resistant it is to overt education, as students do not think they are biased
- More worrisome, we tend to make our own implicit biases into self-fulfilling prophecies
- This is called Stereotype Threat

Stereotype threat

- 40 black and 40 white Princeton undergraduates volunteered to play mini-golf.
- Some were told it was a test of "natural ability“.
- Others were told this was a test of "the ability to think strategically”.
- Black students in the “natural ability” group scored, on average, more than four strokes better than whites.
- White students in the “strategic” group scored four strokes better.

Stone, J., Chalabaev, A., & Harrison, C. K. (2011). Stereotype threat in sports. In M Inzlicht & T. Schmader (Eds) Stereotype Threat: Theory, Process, and Application. Oxford University Press.

What might this mean?

- In our Interprofessional Education there will be a pull to see and act as though the implicit associations are true
- Addressing this is tricky, as the students will have trouble seeing that this is a general bias they have, rather than a response to a particular person or situation
- Worse, students may act in ways which reinforce the implicate association, without even being aware they are doing it

IAT

Leader	Self-confident, Independent, Leader, Assertive, Ambitious
Supporter	Team-player, Collaborative, Supporter, Responsive, Assistant
Nurse	Nurse Anesthetist, Midwife, Nurse Practitioner, Clinical Nurse Specialist, Registered Nurse
Doctor	Pediatrician, Internal Medicine MD, Family Medicine MD, Surgeon, Obstetrician

Teams in patient-based, population health

- Everyone needs to be able to be self-confident, independent, a leader, assertive, and ambitious at times, **but**

- Everyone also needs to be a team-player, collaborative, supporter, responsive, and an assistant at times as well

Addressing implicit associations is essential

- For good patient care
- For good interprofessional teamwork
- For development of the best professionals

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Interested in the IAT?

- Contact Emily Umansky, of Project Implicit
  - Emily Umansky (emily@projectimplicit.net)

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Questions?

Thank you!

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