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Implicit Bias in Health Care

OVERVIEW

The role of implicit biases on healthcare outcomes has become a concern as some cite that implicit biases contribute to health disparities, professionals' attitudes toward and interactions with patients, quality of care, and treatment decisions. This session will explore definitions of implicit and explicit bias, the nature and dynamics of implicit biases, and how they can affect health outcomes. Because implicit biases are unconscious, strategies will be reviewed to assist in raising professionals' awareness of and interventions to reduce them.

The purpose of this session is to provide health care professionals an overview of implicit bias. This includes an exploration of definitions of implicit and explicit bias. The nature and dynamics of implicit biases and how they can affect health outcomes will be discussed. Finally, because implicit biases are unconscious, strategies will be reviewed to assist in raising professionals' awareness of and interventions to reduce them.

LEARNING OUTCOME AND OBJECTIVES: Upon completion of this course, you should be able to:

- Define implicit and explicit biases and related terminology.
- Recognize five different types of implicit bias.
- Describe how different theories explain the nature of implicit biases, and outline the consequences of implicit biases.
- Describe two methods used to assess and mitigate implicit bias.
- Discuss strategies to raise awareness of and mitigate or eliminate one's implicit biases.
- Explain the rationale for why implicit bias presents challenges in health care.

INTRODUCTION

In the 1990s, social psychologists Dr. Mahzarin Banaji and Dr. Tony Greenwald introduced the concept of implicit bias and developed the Implicit Association Test (IAT) as a measure. In 2003, the Institute of Medicine published the report Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care highlighting the role of health professionals' implicit biases in the development of health disparities. The phenomenon of implicit bias is premised on the assumption that while well-meaning individuals may deny prejudicial beliefs, these implicit biases negatively affect their clinical communications, interactions, and diagnostic and treatment decision-making.

Implicit bias (IB), the human tendency to make decisions outside of conscious awareness and based on inherent factors rather than evidence, may influence the health care you provide. Also known as unconscious bias, IB establishes itself through attitudes or behaviors developed early in life that are prejudiced against or in favor of one person or group compared to another (Fitzgerald & Hurst, 2017). As identified in the literature across professional health disciplines, IB is associated with negative health disparities, health inequities, and substandard care among diverse populations. Likewise, IB may affect all

persons' health by unconsciously influencing how providers perceive and act toward clients, and conversely, how clients may view provider interactions ([National Center for Cultural Competency (NCC)] August 2021; [Institute of Medicine (IOM)], 2003).

IB is unintentional and attributed to the reflexive neurological system that drives the brain's automatic processing function. As such, an individual's feelings, attitudes, and decisions are involuntary, and their subsequent actions may conflict with their stated views (NCC, 2021). Consequently, the effects of IB can be difficult to identify and measure, and actions resulting from it often are challenging to recognize and control. Health care literature describes ongoing IB mitigation efforts, including the promotion of provider awareness, participation in continuing education, advancement of policy development, legislation, and institutional changes, and the contribution of research (Fitzgerald & Hurst, 2017; NCC, 2021; Brecher et al., 2021; The Joint Commission, 2020). Learning about IB and how it differs from explicit bias, recognizing types of IB and how IB provider-client interactions are affected, and embracing strategies to address its impact on practice are approaches toward reducing barriers to equitable care, closing the gap in health disparities between diverse populations, and achieving patient-centered care.

One explanation is that implicit biases are a heuristic, or a cognitive or mental shortcut. Heuristics offer individuals general rules to apply to situations in which there is limited, conflicting, or unclear information. Use of a heuristic results in a quick judgment based on fragments of memory and knowledge, and therefore, the decisions made may be erroneous. If the thinking patterns are flawed, negative attitudes can reinforce stereotypes. In health contexts, this is problematic because clinical judgments can be biased and adversely affect health outcomes. The Joint Commission provides the following example: A group of physicians congregate to examine a child's x-rays but has not been able to reach a diagnostic consensus. Another physician with no knowledge of the case is passing by, sees the x-rays, and says "Cystic fibrosis." The group of physicians was aware that the child is African American and had dismissed cystic fibrosis because it is less common among Black children than White children.

In a sociocultural context, biases are generally defined as negative evaluations of a particular social group relative to another group. Explicit biases are conscious, whereby an individual is fully aware of his/her attitudes and there may be intentional behaviors related to these attitudes. For example, an individual may openly endorse a belief that women are weak and men are strong and therefore each should maintain certain roles based upon this. This bias is fully conscious and is made explicitly known. This bias could impact one’s ability to interact with individuals identifying as male or female.

FitzGerald and Hurst assert that there are cases in which implicit cognitive processes are involved in biases and conscious availability, controllability, and mental resources are not. The term "implicit bias" refers to the unconscious attitudes and evaluations held by individuals. These individuals do not necessarily endorse the bias, but the embedded beliefs/attitudes can negatively affect their behaviors. Some have asserted that the cognitive processes that dictate implicit and explicit biases are separate and independent.

Implicit biases can start as early as 3 years of age. As children age, they may begin to become more egalitarian in what they explicitly endorse, but their implicit biases may not necessarily change in accordance to these outward expressions. Because implicit biases occur on the subconscious or unconscious level, particular social attributes (e.g., skin color) can quietly and insidiously affect perceptions and behaviors

According to Georgetown University's National Center on Cultural Competency, social characteristics that can trigger implicit biases can include but not be limited to:

- Age
- Disability
- Education
- English language proficiency and fluency
- Ethnicity
- Health status
- Disease/diagnosis (e.g., HIV/AIDS)
- Insurance
- Obesity
- Race
- Socioeconomic status
- Sexual orientation, gender identity, or gender expression
- Skin tone
- Substance use

An alternative way of conceptualizing implicit bias is that an unconscious evaluation is only negative if it has further adverse consequences on a group that is already disadvantaged or produces inequities. Disadvantaged groups are marginalized in the healthcare system and vulnerable on multiple levels; health professionals' implicit biases can further exacerbate these existing disadvantages. When the concept of implicit bias was introduced in the 1990s, it was thought that implicit biases could be directly linked to behavior.

Learning about common types of IB and their unintended effects between health professionals and patients is a strategy to build IB awareness. The following list is not intended to be exhaustive but to present a range of IBs that may influence provider-patient or institutional decisions (Brecher et al., 2021; NCC, 2021; Smith, 2021). Reflect on how your beliefs may confirm or conflict with the examples and how you might be affected in these scenarios:

- Affinity-Preference for people who share qualities with you or someone you like.
    - Example-A Clinic Director (CD) is recruiting to fill one physical therapist vacancy. The final two candidates share comparable minimum education requirements and clinical experiences. The CD selects the candidate who attended their alma mater.
        - Rationale-Although the candidates, are comparable, the CD selects the candidate who feels comfortable and familiar.
- Anchoring–Tendency to rely too heavily on the first piece of information offered during decision making.
    - Example: While assessing a 25-year-old patient vaccinated for COVID-19, the nurse practitioner notes signs and symptoms: headache, fatigue, sore throat with red and enlarged tonsils, and fever x three days. The patient's strep test is positive, and antibiotics are prescribed. The patient finishes the prescription but returns in seven days with continued complaints of headache and growing fatigue. At this visit, a COVID-19 rapid test is performed, the result is positive.
        - Rationale-Provider focused on the patient's presenting problem and rushed to a diagnosis that supported their initial clinical impression.

- Attribution-Tendency to characterize other people's successes as luck or help from others and explain their failures as lack of skill or personal shortcomings.
    - Example-A clinical social worker (CSW) who cannot finish case notes promptly compared to their colleagues believes that their caseload has too many needy patients with complex mental health diagnoses.
        - Rationale-CSW's justification is based on perceived situational factors.
- Beauty-Assumptions about people's skills or personality based on their physical appearance and tendency to favor more attractive people.
    - Example-A client seeks a surgeon by visiting their insurance plan's website. They are impressed with a physician's photo they consider handsome and select them because they associate the surgeon's appearance with intelligence and skill.
        - Rationale-The client relates beauty with other positive attributes such as intelligence.
- Confirmation-Selective focus on information that supports your initial opinion(s).
    - Example-A dentist recovers from COVID-19 infection with mild symptoms yet remains vaccine-hesitant.
        - Rationale-The dentist remains unvaccinated because they feel that they acquired sufficient natural immunity.
- Conformity-Tendency to be swayed by the views of other people.
    - Example-A long-term care patient follows Hinduism, practices a strict vegan diet, and asks their nurse for vegan meals. The patient's roommate overhears the conversation and interjects, "dietary will send you whatever you want." Without validating the patient's request with the dietician, the nurse submits the vegan meal request.
        - Rationale-The nurse tends to agree with people around them rather than use their professional judgment.
- Disability-Tendency to assign a lower quality of life because of disability.
    - Example-An adult patient with Down syndrome and severe congenital heart disease was considered by their primary care provider (PCP) to be an inappropriate referral for a heart transplant procedure due to their intellectual/developmental delay (IDD).
        - Rationale-The PCP underestimates the quality of life for this patient based on their IDD and automatically excludes them from consideration for an organ transplant.
- Gender- Preference for one gender over the other.
    - Example-An infertility practice accepts a 35-year-old female patient with a history of infertility, and in-vitro fertilization is recommended. However, the physician refuses to provide treatment, alleging that their religious beliefs prevent them from performing the procedure for a lesbian.
        - Rationale-The physician holds an inherent gender bias against a patient with a sexual orientation that conflicts with their religious beliefs.
- Halo-Focus on one positive feature about a person or service that clouds your judgment.
    - Example-A patient asks a pharmacist for a particular sleep aid advertised by a film star. The pharmacist cautions the patient about contraindications for that product. However, the patient chooses their originally requested sleep aid.
        - Rationale-The patient believes that the sleep aid spokesperson is honest, just like the film characters they portray.
- Obesity-Tendency to negatively react to a person's obesity.
    - Example-An obese teenager receives physical therapy (PT) for back pain. The PT report indicates that the patient is non-compliant with exercise and makes little progress due to their weight. A follow-up x-ray indicates scoliosis with 30-degree curvature of the spine.
        - Rationale-The PT report emphasizes negative feelings about the patient's obesity rather than the patient's clinical mobility status.

- Racial-An automatic preference for one race over another.
    - Example-A black adult patient with chronic neuropathy and complaint of significant leg pain x two days presents to the Emergency Department. Sobbing, the patient notes that the doctor's medicine never provides relief. The triage nurse believes the patient to be narcotic seeking and determines that they can wait to be seen.
        - Rationale-Without completing an objective clinical assessment, the triage nurse believes that this drug-seeking behavior is not unusual because the patient is black.

Other Common Terminologies
In addition to understanding implicit and explicit bias, there is additional terminology related to these concepts that requires specific definition.

Cultural Competence
Cultural competence is broadly defined as practitioners' knowledge of and ability to apply cultural information and appreciation of a different group's cultural and belief systems to their work. It is a dynamic process, meaning that there is no endpoint to the journey to becoming culturally aware, sensitive, and competent. Some have argued that cultural curiosity is a vital aspect of this approach.

Cultural Humility
Cultural humility refers to an attitude of humbleness, acknowledging one's limitations in the cultural knowledge of groups. Practitioners who apply cultural humility readily concede that they are not experts in others' cultures and that there are aspects of culture and social experiences that they do not know. From this perspective, patients are considered teachers of the cultural norms, beliefs, and value systems of their group, while practitioners are the learners. Cultural humility is a lifelong process involving reflexivity, self-evaluation, and self-critique.

Discrimination
Discrimination has traditionally been viewed as the outcome of prejudice. It encompasses overt or hidden actions, behaviors, or practices of members in a dominant group against members of a subordinate group. Discrimination has also been further categorized as lifetime discrimination, which consists of major discreet discriminatory events, or everyday discrimination, which is subtle, continual, and part of day-to-day life and can have a cumulate effect on individuals.

Diversity
Diversity "encompasses differences in and among societal groups based on race, ethnicity, gender, age, physical/mental abilities, religion, sexual orientation, and other distinguishing characteristics". Diversity is often conceptualized into singular dimensions as opposed to multiple and intersecting diversity factors.

Intersectionality
Intersectionality is a term to describe the multiple facets of identity, including race, gender, sexual orientation, religion, sex, and age. These facets are not mutually exclusive, and the meanings that are ascribed to these identities are inter-related and interact to create a whole.

Prejudice
Prejudice is a generally negative feeling, attitude, or stereotype against members of a group. It is important not to equate prejudice and racism, although the two concepts are related. All humans have prejudices, but not all individuals are racist. The popular definition is that "prejudice plus power equals racism." Prejudice stems from the process of ascribing every member of a group with the same attribute.

Race
Race is linked to biology. Race is partially defined by physical markers (e.g., skin or hair color) and is generally used as a mechanism for classification. It does not refer to cultural institutions or patterns. In modern history, skin color has been used to classify people and to imply that there are distinct biologic differences within human populations. Historically, the U.S. Census has defined race according to ancestry and blood quantum; today, it is based on self-classification.

Racism
Racism is the "systematic subordination of members of targeted racial groups who have relatively little social power…by members of the agent racial group who have relatively more social power". Racism is perpetuated and reinforced by social values, norms, and institutions.
There is some controversy regarding whether unconscious (implicit) racism exists. Experts assert that images embedded in our unconscious are the result of socialization and personal observations, and negative attributes may be unconsciously applied to racial minority groups. These implicit attributes affect individuals' thoughts and behaviors without a conscious awareness. Structural racism refers to the laws, policies, and institutional norms and ideologies that systematically reinforce inequities resulting in differential access to services such as health care, education, employment, and housing for racial and ethnic minorities.

Microaggressions
Implicit biases can impact our relationships and interactions with each other in many ways, some of which are described in the research findings listed above. One way that implicit biases can manifest is in the form of microaggressions: subtle verbal or nonverbal insults or denigrating messages communicated toward a marginalized person, often by someone who may be well-intentioned but unaware of the impact their words or actions have on the target. Examples of common microaggressions include statements like:

- Where are you really from?
- What are you?
- You don't act like a normal Black person.
- You're really pretty for a dark-skinned girl.

Microaggressions can be based on any aspect of a marginalized person's identity (for example, sexuality, religion, or gender). Individual microaggressions may not be devastating to the person experiencing them; however, their cumulative effects over time can be large. Often, microaggressions are never meant to hurt – acts done with little conscious awareness of their meanings and effects. Instead, their slow accumulation during childhood and over a lifetime is in part what defines a marginalized experience, making explanation and communication with someone who does not share this identity particularly difficult. Social others are microaggressed hourly, daily, weekly, monthly.

Research shows that black, indigenous, and other people of color (BIPOC) experience microaggressions every day – from the time they get up in the morning until they go to bed at night. You might ask yourself some of the following questions: "Do you know what it's like to be a black person in this society where you go into a subway and you sit down and people never sit next to you? Do you know what it's like to pass a man or a woman, and they suddenly clutch their purses more tightly?" Many white individuals have never thought about how this feels because they do not live this reality. It is invisible to them. By asking these types of questions, the goal is to make the invisible visible, and to get individuals to the microaggressions BIPOC experience on a daily basis, and to challenge them to understand how those microaggressions negatively impact the daily lived experiences of BIPOC.

Pervasive implicit bias and microaggressions do more than simply cause individuals to "feel bad." Constant exposure to racism in both implicit and explicit forms can have cumulative and serious impacts on BIPOC. Researchers are only now beginning to identify and understand some of these impacts. For example, scientists have begun linking prolonged racism-related stress to racial health disparities such as differences in maternal mortality rates between Black and white women. Other racial health disparities, such as differing rates of asthma and diabetes across racial groups, may also be linked to the stress impact of racism. Stress hormones, while harmless in small doses, are toxic with prolonged exposure, and can cause permanent damage to the nervous, cardiovascular, immune, and endocrine systems.

In addition to health disparities, the so-called "racial achievement gap" in education has also been attributed at least in part to the presence of implicit bias, stereotypes, and microaggressions. In the 1990s, psychologists Claude Steele and Joshua Aronson provided empirical evidence for the impact of "stereotype threat" on academic performance. The idea behind stereotype threat is that awareness of negative stereotypes about one's racial group raises stress and self-doubt among students, who then perform worse. Over two decades of data show that stereotype threat is common and consequential.

In other research, Dr. Patricia F. Katopol looks at the impact of stereotype threat on the use of library reference services by BIPOC, specifically African American college students at primarily white institutions. Katopol argues that stereotype threat may be an element of information anxiety – an element that leads many Black students to attempt to find all of the information they need on their own rather than having to interact with librarians who they perceive as judging them.

In each of these cases, current research is challenging our notions of cause and effect when it comes to implicit bias, stereotypes, racism, and life outcomes. Rather than attributing the causes of disparate life outcomes to inherent racial differences, this research asks us to consider racism itself as the cause.

MEASUREMENT OF IMPLICIT BIAS

Surprising to many providers, the level of IB demonstrated by health care professionals is understood to be comparable to the general population (Fitzgerald & Hurst, 2017). Given the unconscious nature of IB, directly asking providers about their IB through a self-report survey is not recommended. However, two common methods used to assess IB are Implicit Association Testing and Assumption Method.

Implicit Association Testing (IAT) is a computer-generated online testing method that "measures implicit associations between participants' concepts and attitudes across a wide range of domains: race and ethnicity, disability, sexuality, age, gender, religion, and weight." For over 20 years, web-based IAT data has been collected through Project Implicit, a consortium of researchers from Harvard University, the University of Virginia, and the University of Washington to study and promote the understanding of attitudes, stereotypes, and other hidden biases that influence perception, judgment, and action (Project Implicit, 2021). The test can be accessed at https://implicit.harvard.edu/implicit/takeatest.html The learner is encouraged to follow the link to the IAT and consider your results and how they might impact your interactions with your patients/clients.

The IAT is based on the premise that implicit bias is an objective and discreet phenomenon that can be measured in a quantitative manner. Developed and first introduced in 1998, it is an online test that assesses implicit bias by measuring how quickly people make associations between targeted categories with a list of adjectives. For example, research participants might be assessed for their implicit biases by seeing how rapidly they make evaluations among the two groups/categories career/family and male/female. Participants tend to more easily affiliate terms for which they hold implicit or explicit

biases. So, unconscious biases are measured by how quickly research participants respond to stereotypical pairings (e.g., career/male and family/female). The larger the difference between the individual's performance between the two groups, the stronger the degree of bias. Since 2006, more than 4.6 million individuals have taken the IAT, and results indicate that the general population holds implicit biases.

The IAT is not without controversy. One of the debates involves whether IAT scores focus on a cognitive state or if they reflect a personality trait. If it is the latter, the IAT's value as a diagnostic screening tool is diminished. There is also concern with its validity in specific arenas, including jury selection and hiring. Some also maintain that the IAT is sensitive to social context and may not accurately predict behavior. Essentially, a high IAT score reflecting implicit biases does not necessarily link to discriminating behaviors, and correlation should not imply causation. A meta-analysis involving 87,418 research participants found no evidence that changes in implicit biases affected explicit behaviors.
There is evidence that taking the IAT can be helpful for healthcare professions interested in identifying implicit biases.

Among the more than 4 million participants who have completed the IAT, individuals generally exhibited implicit preference for White faces over Black or Asian faces. They also held biases for light skin over dark skin, heterosexual over gender and sexual minorities (LGBTQ+), and young over old. The Pew Research Center also conducted an exploratory study on implicit biases, focusing on the extent to which individuals adhered to implicit racial biases. A total of 2,517 IATs were completed and used for the analysis. Almost 75% of the respondents exhibited some level of implicit racial biases. Only 20% to 30% did not exhibit or showed very little implicit bias against the minority racial groups tested. Approximately half of all single-race White individuals displayed an implicit preference for White faces over Black faces. For single-race Black individuals, 45% had implicit preference for their own group. For biracial White/Black adults, 23% were neutral. In addition, 22% of biracial White/Asian participants had no or minimal implicit racial biases. However, 42% of the White/Black biracial adults leaned toward a pro-White bias.

In another interesting field experiment, although not specifically examining implicit bias, resumes with names commonly associated with African American or White candidates were submitted to hiring officers. Researchers found that resumes with White-sounding names were 50% more likely to receive callbacks than resumes with African American-sounding names. The underlying causes of this gap were not explored.

Implicit bias related to sex and gender is also significant. A survey of emergency medicine and obstetrics/gynecology residency programs in the United States sought to examine the relationship between biases related to perceptions of leadership and gender. In general, residents in both programs (regardless of gender) tended to favor men as leaders. Male residents had greater implicit biases compared with their female counterparts.

Other forms of implicit bias can affect the provision of health and mental health care. One online survey examining anti-fat biases was provided to 4,732 first-year medical students. Respondents completed the IAT, two measures of explicit bias, and an anti-fat attitudes instrument. Nearly 75% of the respondents were found to hold implicit anti-fat biases. Interestingly, these biases were comparable to the scope of implicit racial biases. Male sex, non-Black race, and lower body mass index (BMI) predicted holding these implicit biases.

Certain conditions or environmental risk factors are associated with an increased risk for certain implicit biases, including:

- Stressful emotional states (e.g., anger, frustration)
- Uncertainty
- Low-effort cognitive processing
- Time pressure
- Lack of feedback
- Feeling behind with work
- Lack of guidance
- Long hours
- Overcrowding
- High-crises environments
- Mentally taxing tasks
- Juggling competing tasks

Assumption Method (AM) is a clinical vignette-based testing method that measures differences across participants' responses. The vignettes are designed to be the same except for one variable, such as gender. Inferences are made based on statistically significant responses correlated with the selected feature, such as the patient's gender. An inference is made that "the response is partly due to the result of implicit processes in the subject's decision-making" (Fitzgerald & Hurst, 2017).

The Institute for Healthcare Improvement (IHI) developed an assessment tool to help health care organizations evaluate their current health equity efforts and determine where to focus improvement efforts. Teams use this assessment to provide direction for building an equity strategy and promote conversations within the organization to improve health equity. The tool can be accessed at https://www.ihi.org/sites/default/files/IHI_ImprovingHealthEquity_AssessmentTool.pdf

The tool is based upon 5 components of a framework to improve equity:

- Make Health Equity a Strategic Priority. Organizational leaders commit to improving health equity by including equity in the organization's strategy and goals. Equity is viewed as mission critical — that is, the mission, vision, and business cannot thrive without a focus on equity.
- Build Infrastructure to Support Health Equity. Operationalizing a health equity strategy requires dedicated resources, including human resources and data resources, as well as an organizational infrastructure.
- Address the Multiple Determinants of Health. Health care organizations must develop strategies to address the multiple determinants of health, including health care services, organizational policies, the organization's physical environment, the community's socioeconomic status, and encouraging healthy behaviors.
- Eliminate Racism and Other Forms of Oppression. Health care organizations must look at their systems, practices, and policies to assess where inequities are produced and where equity can be proactively created.
- Partner with the Community to Improve Health Equity. To support communities to reach their full health potential, health care organizations must work in partnership with community members and community-based organizations that are highly engaged with community members.

In the assessment tool, there is a list of individual elements for each of the five framework components. Organizations should rate their progress related to each element to assess current health equity efforts and identify where opportunities to improve exist. The assessment can serve as a useful starting point for discussions among health system leaders about health equity within the organization.

Individuals are urged to make specific comments related to each component identifying specific examples, achievements, challenges, questions, next steps, and any other important items. In reviewing the data, organization leaders should discuss the following questions:

- For which elements do our individual scores vary the most? Discuss the variation to understand differences in scores.
- In which components (and individual elements) do we have little or no progress (i.e., elements rated a 2 or 1)?
- What would it take for us to rate ourselves a "5"?
- For items scored "I don't know," why don't we know how the organization rates on the element?
- How can we find out the status?
- Why is it important for us to find out?
- What are the top two or three findings that are most important for us to address in the near term?
- Who should we meet with to begin to act on our findings?
- Where are our strengths and where do we have the greatest opportunities for improvement?

A variety of theoretical frameworks have been used to explore the causes, nature, and dynamics of implicit biases. Each of the theories is described in depth, with space given to explore controversies and debates about the etiology of implicit bias.

THEORETICAL EXPLANATIONS

One of the main goals of social psychology is to understand how attitudes and belief structures influence behaviors. Based on frameworks from both social and cognitive psychology, many theoretical frameworks used to explain implicit bias revolve around the concept of social cognition. One branch of cognitive theory focuses on the role of implicit or nondeclarative memory. Experts believe that this type of memory allows certain behaviors to be performed with very little conscious awareness or active thought. Examples include tooth brushing, tying shoelaces, and even driving. To take this concept one step farther, implicit memories may also underlie social attitudes and stereotype attributions. This is referred to as implicit social cognition. From this perspective, implicit biases are automatic expressions based on belonging to certain social groups. The IAT is premised on the role of implicit memory and past experiences in predicting behavior without explicit memory triggering.

Another branch of cognitive theory used to describe implicit biases involves heuristics. When quick decisions are required under conditions of uncertainty or fatigue, and/or when there is a tremendous amount of information to assimilate without sufficient time to process, decision-makers resort to heuristics. Heuristics are essentially mental short cuts that facilitate (usually unconscious) rules that promote automatic processing. However, these rules can also be influenced by socialization factors, which could then affect any unconscious or latent cognitive associations about power, advantage, and privilege. Family, friends, media, school, religion, and other social institutions all play a role in developing and perpetuating implicit and explicit stereotypes, and cognitive evaluations can be primed or triggered by an environmental cue or experience. When a heuristic is activated, an implicit memory or bias may be triggered simultaneously. This is also known as the dual-process model of information processing.

Behavioral or Functional Perspectives

Behavioral or functional theorists argue that implicit bias is not necessarily a latent or unconscious cognitive structure. Instead, this perspective recognizes implicit bias as a group-based behavior. Behavior is biased if it is influenced by social cues indicating the social group to which someone belongs. Social

cues can occur rapidly and unintentionally, which ultimately leads to automatic or implicit effects on behavior. The appeal of a behavioral or functional approach to implicit bias is that it is amoral; that is, it is value- and judgment-free. Rather than viewing implicit bias as an invisible force (i.e., unconscious cognitive structure), it is considered a normal behavior.

Neuroscience Perspectives

Implicit bias has neuroscientific roots as well and has been linked to functions of the amygdala. The amygdala is located in the temporal lobe of the brain, and it communicates with the hypothalamus and plays a large role in memory. When situations are emotionally charged, the amygdala is activated and connects the event to memory, which is why individuals tend to have better recall of emotional events. This area of the brain is also implicated in processing fear. Neuroscientific studies on implicit biases typically use functional magnetic resonance imaging (fMRI) to visualize amygdala activation during specific behaviors or events. In experimental studies, when White research subjects were shown photos of Black faces, their amygdala appeared to be more activated compared to when they viewed White faces. This trend toward greater activation when exposed to view the faces of persons whose race differs from the viewer starts in adolescence and appears to increase with age. This speaks to the role of socialization in the developmental process.

It may be that the activation of the amygdala is an evolutionary threat response to an outgroup. Another potential explanation is that the activation of the amygdala is due to the fear of appearing prejudiced to others who will disapprove of the bias. The neuroscientific perspective of implicit bias is controversial. While initial empirical studies appear to link implicit bias to amygdala activation, many researchers argue this relationship is too simplistic.

Structural or Critical Theory

Many scholars and policymakers are concerned about the narrow theoretical views that researchers of implicit bias have taken. By focusing on unconscious cognitive structures, social cognition and neuroscientific theories miss the opportunity to also address the role of macro or systemic factors in contributing to health inequities. By focusing on the neurobiology of implicit bias, for example, racism and bias is attributed to central nervous system function, releasing the individual from any control or responsibility. However, the historical legacy of prejudice and bias has roots in economic and structural issues that produce inequities. Larger organizational, institutional, societal, and cultural forces contribute, perpetuate, and reinforce implicit and explicit biases, racism, and discrimination. Psychological and neuroscientific approaches ultimately decontextualize racism.

In response to this conflict, a systems-based practice has been proposed. This type of practice emphasizes the role of sociocultural determinants of health outcome and the fact that health inequities stem from larger systemic forces. As a result, medical and health education and training should focus on how patients' health and well-being may reflect structural vulnerabilities driven in large part by social, cultural, economic, and institutional forces. Health and mental health professionals also require social change and advocacy skills to ensure that they can effect change at the organizational and institutional levels.

Implicit bias is not a new topic; it has been discussed and studied for decades in empirical literature. Because implicit bias is a complex and multifaceted phenomenon, it is important to recognize that there may be no one single theory that can fully explain its etiology.

CONSEQUENCES OF IMPLICIT BIAS

IB presents challenges in health care when it manifests itself inappropriately and unconsciously contributes to health disparities. Health disparities are differences in health status or disease that systematically and adversely affect less advantaged groups. These inequities are often linked to historical and current unequal distribution of resources due to poverty, structural inequities, insufficient access to health care, and/or environmental barriers and threats. Healthy People 2030 defines a health disparity as: "…a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion."

For example, the Centers for Disease Control and Prevention reports that during the period 2007-2016, nearly 700 women died in the US annually from pregnancy-related complications (Petersen et al., 2019). Maternal mortality in the US is alarming, as are its significant racial and ethnic disparities. American Indian, Alaska Native, and black women are two to three times more likely to die of pregnancy-related causes than white women. It is understood that social determinants of health have historically prevented many people from diverse minority groups from "accessing fair opportunities for economic, physical, and emotional health, factors understood to impact health equity" (Howell, 2018). Although targeted efforts to isolate causes and develop successful mitigation strategies to combat US maternal mortality are ongoing, further innovative research and creative strategies are warranted.

In 2003, the Institute of Medicine's formative report Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care laid a foundation for exploration into health care disparities in the US, including bias toward patients of diverse racial, ethnic, or cultural populations. The report concluded that "bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers may contribute to racial and ethnic disparities in health care" (IOM, 2003). More recently, Fitzgerald and Hurst's (2018) systematic review of 42 articles discussed robust documentation of IB among nurses and physicians and reinforced the negative effects of professional caregivers' IB on vulnerable populations including, "minority ethnic populations, immigrants, socioeconomically challenged individuals, persons with low health literacy, sexual minorities, children, women, elderly, mentally ill, overweight and the disabled." These reports and studies contribute to the evolving body of knowledge about IB in health care through research and provoke thoughts about the effects of IB on health outcomes.

Despite progress made to lessen the gaps among different groups, health disparities continue to exist. One example is racial disparities in life expectancy among Black and White individuals in the United States. Life expectancy for Black men is 4.4 years lower than White men; for Black women, it is 2.9 years lower compared with White women. Hypertension, diabetes, and obesity are more prevalent in non-Hispanic Black populations compared with non-Hispanic White groups (25%, 49%, and 59% higher, respectively). In one study, African American and Latina women were more likely to experience cesarean deliveries than their White counterparts, even after controlling for medically necessary procedures. This places African American and Latina women at greater risk of infection and maternal mortality.

Multidisciplinary health literature indicates that many factors contribute to health disparities, including "quality of healthcare, underlying chronic conditions, structural racism, and IB" (Petersen et al, 2019). Narayan (2019) cites literature that indicates health care providers' IB is associated with "inequitable care and negative effects on patient care including inadequate patient assessments, inappropriate diagnoses and treatment decisions, less time involved in patient care, and patient discharges with insufficient follow-up."

Additionally, Saluja and Bryant (2021), suggest that IB can affect provider-patient communication among people of color. The effects may include "subtle racial biases expressed by providers, such as approaching patients with a condescending tone that decreases the likelihood that patients will feel heard and valued by their providers." Variation in therapy options may also occur based on assumptions about clients' treatment adherence capabilities or presumed health issues.

In an ideal situation, health professionals would be explicitly and implicitly objective and clinical decisions would be completely free of bias. However, healthcare providers have implicit (and explicit) biases at a rate comparable to that of the general population. It is possible that these implicit biases shape healthcare professionals' behaviors, communications, and interactions, which may produce differences in help-seeking, diagnoses, and ultimately treatments and interventions. They may also unwittingly produce professional behaviors, attitudes, and interactions that reduce patients' trust and comfort with their provider, leading to earlier termination of visits and/or reduced adherence and follow-up.

IB may negatively impact clinical outcomes, as well as violate patient trust. Penner et al., (2016) found in a study of black oncology patients and their physicians that "patients perceived providers high in IB as less supportive of and spent less time with their patients as compared to providers low in implicit bias. In turn, black patients recognized those attitudes and viewed high-implicit-bias physicians as less patient-centered than physicians low in this bias. The patients also had more difficulty remembering what their physicians told them, had less confidence in their treatment plans, and thought it would be more difficult to follow recommended treatments." These findings on providers' implicit racial bias underscore patients' perceptions of their experiences with providers' IB. However, its overall effects on health care quality and health outcomes for diverse populations invite further exploration (Penner et al., 2016).

In a landmark 2007 study, a total of 287 internal medicine physicians and medical residents were randomized to receive a case vignette of an either Black or White patient with coronary artery disease. All participants were also administered the IAT. When asked about perceived level of cooperativeness of the White or Black patient from the vignette, there were no differences in their explicit statements regarding cooperativeness. Yet, the IAT scores did show differences, with scores showing that physicians and residents had implicit preferences for the White patients. Participants with greater implicit preference for White patients (as reflected by IAT score) were more likely to select thrombolysis to treat the White patient than the Black patient. This led to the possible conclusion that implicit racial bias can influence clinical decisions regarding treatment and may contribute to racial health disparities. However, some argue that using vignettes depicting hypothetical situations does not accurately reflect real-life conditions that require rapid decision-making under stress and uncertainty.

It has been hypothesized that providers' levels of bias affect the ratings of patient-centered care. Patient-centered care has been defined as patients' positive ratings in the areas of perception of provider concern, provider answering patients' questions, provider integrity, and provider knowledge of the patient. Using data from 134 health providers who completed the IAT, a total of 2,908 diverse racial and ethnic minority patients participated in a telephone survey. Researchers found that for providers who scored high on levels of implicit bias, African American patients' ratings for all dimensions of patient-centered care were low compared with their White patient counterparts. Latinx patient ratings were low regardless of level of implicit bias.

A 2013 study recorded clinical interactions between 112 low-income African American patients and their 14 non-African American physicians for approximately two years. Providers' implicit biases were also assessed using the IAT. In general, the physicians talked more than the patients; however, physicians with higher implicit bias scores also had a higher ratio of physician-to-patient talk time. Patients with higher

levels of perceived discrimination had a lower ratio of physician-to-patient talk time (i.e., spoke more than those with lower reported perceived discrimination). A lower ratio of physician-patient talk time correlated to decreased likelihood of adherence.

Another study assessed 40 primary care physicians and 269 patients. The IAT was administered to both groups, and their interactions were recorded and observed for verbal dominance (defined as the time of physician participation relative to patient participation). When physicians scored higher on measures of implicit bias, there was 9% more verbal dominance on the part of the physicians in the visits with Black patients and 11% greater in interactions with White patients. Physicians with higher implicit bias scores and lower verbal dominance also received lower scores on patient ratings on interpersonal care, particularly from Black patients.

In focus groups with racially and ethnically diverse patients who sought medical care for themselves or their children in New York City, participants reported perceptions of discrimination in health care. They reported that healthcare professionals often made them feel less than human, with varying amounts of respect and courtesy. Some observed differences in treatment compared with White patients. One Black woman reported:
When the doctor came in [after a surgery], she proceeded to show me how I had to get up because I'm being released that day "whether I like it or not"…She yanked the first snap on the left leg…So I'm thinking, 'I'm human!' And she was courteous to the White lady [in the next bed], and I've got just as much age as her. I qualify on the level and scale of human being as her, but I didn't feel that from the doctor.

Another participant was a Latino physician who presented to the emergency department. He described the following:
They put me sort of in the corner [in the emergency department] and I can't talk very well because I can't breathe so well. The nurse comes over to me and actually says, "Tu tiene tu Medicaid?" I whispered out, "I'm a doctor…and I have insurance." I said it in perfect English. Literally, the color on her face went completely white…Within two minutes there was an orthopedic team around me…I kept wondering about what if I hadn't been a doctor, you know? Pretty eye opening and very sad.

These reports are illustrative of many minority patients' experiences with implicit and explicit racial/ethnic biases. Not surprisingly, these biases adversely affect patients' views of their clinical interactions with providers and ultimately contribute to their mistrust of the healthcare system.

RECOGNIZING AND REDUCING IMPLICIT BIAS

There are no easy answers to raising awareness and reducing health providers' implicit bias. Each clinician may be in a different developmental stage in terms of awareness, understanding, acceptance, and application of implicit bias to their practice. A developmental model for intercultural sensitivity training has been established to help identify where individuals may be in this developmental journey. It is important to recognize that the process of becoming more self-aware is fluid; reaching one stage does not necessarily mean that it is "conquered" or that there will not be additional work to do in that stage. As a dynamic process, it is possible to move back and forth as stress and uncertainty triggers implicit biases. This developmental model includes six stages:

1. Denial: In this stage, the individual has no awareness of the existence of cultural differences between oneself and members of other cultural groups and subgroups. Individuals in this stage have no awareness of implicit bias and cannot distinguish between explicit and implicit biases.

2. Defense: In this stage, the person may accept that implicit biases exist but does not acknowledge that implicit biases exist within themselves.
3. Minimization: An individual in this stage acknowledges that implicit biases may exist in their colleagues and possibly themselves. However, he or she is uncertain of their consequences and adverse effects. Furthermore, the person believes he or she is able to treat patients in an objective manner.
4. Acceptance: In the acceptance stage, the individual recognizes and acknowledges the role of implicit biases and how implicit biases influence interactions with patients.
5. Adaptation: Those in the adaptation stage self-reflect and acknowledge that they have unrecognized implicit biases. Not only is there an acknowledgement of the existence of implicit bias, but these people also begin to actively work to reduce the potential impact of implicit biases on interactions with patients.
6. Integration: At this stage, the health professional works to incorporate change in their day-to-day practice in order to mitigate the effects of their implicit biases on various levels—from the patient level to the organization level.

Creating a safe environment is the essential first step to exploring issues related to implicit bias. Discussions of race, stereotypes, privilege, and implicit bias, all of which are very complex, can be volatile or produce heightened emotions. When individuals do not feel their voices are heard and/or valued, negative emotions or a "fight-or-flight" response can be triggered. This may manifest as yelling, demonstrations of anger, or crying or leaving the room or withdrawing and remaining silent.

Creating and fostering a sense of psychological safety in the learning environment is crucial. Psychological safety results when individuals feel that their opinions, views, thoughts, and contributions are valued despite tension, conflict, and discomfort. This allows the individual to feel that their identity is intact. When psychological safety is threatened, individuals' energies are primarily expended on coping rather than learning. As such, interventions should not seek to confront individuals or make them feel guilty and/or responsible.

When implicit bias interventions or assessments are planned, facilitators should be open, approachable, non-threatening, and knowledgeable; this will help create a safe and inclusive learning environment. The principles of respect, integrity, and confidentiality should be communicated. Facilitators who demonstrate attunement, authenticity, and power-sharing foster positive and productive dialogues about subjects such as race and identity.

Attunement is the capacity of an individual to tacitly comprehend the lived experiences of others, using their perspectives to provide an alternative viewpoint for others. Attunement does not involve requiring others to talk about their experiences if they are not emotionally ready. Authenticity involves being honest and transparent with one's own position in a racialized social structure and sharing one's own experiences, feelings, and views. Being authentic also means being vulnerable. Finally, power-sharing entails redistributing power in the learning environment. The healthcare environment is typically hierarchical, with managers holding more power or authority than others. Furthermore, some staff may hold more power by virtue of being more comfortable speaking/interacting with others. Ultimately, promoting a safe space lays a foundation for safely and effectively implementing implicit bias awareness and reduction interventions.

Typically, health care professionals intend to provide optimal care to all patients, but IB may negatively impact their aim. Strategies to disrupt IB, such as promoting self-awareness and participation in formal training, suggest that biases learned earlier in life may be mitigated (Fitzgerald et al., 2019). Efforts to

define consistent, evidence-based bias reduction strategies are advancing, and evaluation is ongoing. Meanwhile, learning about types of IB and how they may affect health care remains important. Likewise, the support of institutional changes is necessary to sustain meaningful, ongoing mitigation efforts. The literature is rich with resources to mitigate IB, including but not limited to the following topics.

Awareness: As discussed, the IAT can be used as a metric to assess professionals' level of implicit bias on a variety of subjects, and this presupposes that implicit bias is a discrete phenomenon that can be measured quantitatively. When providers are aware that implicit biases exist, discussion and education can be implemented to help reduce them and/or their impact.

Another way of facilitating awareness of providers' implicit bias is to ask self-reflective questions about each interaction with patients. Some have suggested using SOAP (subjective, objective, assessment, and plan) notes to assist practitioners in identifying implicit biases in day-to-day interactions with patients.

Integrating the following questions into charts and notes can stimulate reflection about implicit bias globally and for each specific patient interaction:

- Did I think about any socioeconomic and/or environmental factors that may contribute to the health and access of this patient?
- How was my communication and interaction with this patient? Did it change from my customary pattern?
- How could my implicit biases influence care for this patient?

When reviewing charted notes, providers can look for recurring themes of stereotypical perceptions, biased communication patterns, and/or types of treatment/interventions proposed and assess whether these themes could be influenced by biases related to race, ethnicity, age, gender, sexuality, or other social characteristics.

A review of empirical studies conducted on the effectiveness of interventions promoting implicit bias awareness found mixed results. At times, after a peer discussion of IAT scores, participants appeared less interested in learning and employing implicit bias reduction interventions. However, other studies have found that receiving feedback along with IAT scores resulted in a reduction in implicit bias. Any feedback, education, and discussions should be structured to minimize participant defensiveness.

INTERVENTIONS TO REDUCE IMPLICIT BIASES

Interventions or strategies designed to reduce implicit bias may be further categorized as change-based or control-based. Change-based interventions focus on reducing or changing cognitive associations underlying implicit biases. These interventions might include challenging stereotypes. Conversely, control-based interventions involve reducing the effects of the implicit bias on the individual's behaviors. These strategies include increasing awareness of biased thoughts and responses. The two types of interventions are not mutually exclusive and may be used synergistically.

Perspective Taking: Perspective taking is a strategy of taking on a first-person perspective of a person in order to control one's automatic response toward individuals with certain social characteristics that might trigger implicit biases. The goal is to increase psychological closeness, empathy, and connection with members of the group. Engaging with media that presents a perspective (e.g., watching documentaries, reading an autobiography) can help promote better understanding of the specific group's lives,

experiences, and viewpoints. In one study, participants who adopted the first-person perspectives of African Americans had more positive automatic evaluations of the targeted group.

Consuming media that presents a viewpoint and life experience different from your own can help minimize implicit biases. Visit the following sites listed below and consider how they might challenge or expand your perception of each group. Internet searches can help identify many more options for various social groups.

Think Out Loud Podcast -- Young Black people share their experiences growing up in Portland, Oregon.
https://www.opb.org/article/2020/10/30/young-black-people-share-their-experiences-growing-up-in-portland/

George Takei: Growing Up Asian-American -- This PBS clip is a brief introduction, and the subject can be further explored in Takei's book They Called Us Enemy.
https://www.pbs.org/wnet/pioneers-of-television/video/george-takei-growing-up-asian-american/

Seattle Public Library LGBTQ Staff Picks -- A reading list including books and films focusing on LGBTQ+ life, culture, history, and politics.
https://www.spl.org/programs-and-services/social-justice/lgbtq/lgbtq-staff-picks

Economic Prospects/Social Justice for Minorities
https://www.pbs.org/video/s35-e31-economic-prospectssocial-justice-for-minorities-oabttd/

Discussing the Black Experience in Corporate America
https://www.youtube.com/watch?v=Gu93Ez9SD5o

Racial Bias in Health Care
https://www.youtube.com/watch?v=Uf7Kw5fmu8k

Not Your Asian Stereotype
https://www.youtube.com/watch?v=_pUtz75lNaw

Empathy Interventions: Promoting positive emotions such as empathy and compassion can help reduce implicit biases. This can involve strategies like perspective taking and role playing. In a study examining analgesic prescription disparities, nurses were shown photos of White or African American patients exhibiting pain and were asked to recommend how much pain medication was needed; a control group was not shown photos. Those who were shown images of patients in pain displayed no differences in recommended dosage along racial lines; however, those who did not see the images averaged higher recommended dosages for White patients compared with Black patients. This suggests that professionals' level of empathy (enhanced by seeing the patient in pain) affected prescription recommendations.

In a study of healthcare professionals randomly assigned to an empathy-inducing group or a control group, participants were given the IAT to measure implicit bias prior to and following the intervention. Level of implicit bias among participants in the empathy-inducing group decreased significantly compared with their control group counterparts.

Individuation: Individuation is an implicit bias reduction intervention that involves obtaining specific information about the individual and relying on personal characteristics instead of stereotypes of the group to which he or she belongs. The key is to concentrate on the person's specific experiences,

achievements, personality traits, qualifications, and other personal attributes rather than focusing on gender, race, ethnicity, age, ability, and other social attributes, all of which can activate implicit biases. When providers lack relevant information, they are more likely to fill in data with stereotypes, in some cases unconsciously. Time constraints and job stress increase the likelihood of this occurring.

Mindfulness: Mindfulness requires stopping oneself and deliberately emptying one's mind of distractions or allowing distractions to drift through one's mind unimpeded, focusing only on the moment; judgment and assumptions are set aside. This approach involves regulating one's emotions, responses, and attention to return to the present moment, which can reduce stress and anxiety. There is evidence that mindfulness can help regulate biological and emotional responses and can have a positive effect on attention and habit formation. A mindfulness activity assists individuals to be more aware of their thoughts and sensations. This focus on deliberation moves the practitioner away from a reliance on instincts, which is the foundation of implicit bias-affected practice. Mindfulness approaches include yoga, meditation, and guided imagery.

Goldstein has developed the STOP technique as a practical approach to engage in mindfulness in any moment. STOP is an acronym for:

- Stop
- Take a breath
- Observe
- Proceed

The learner can access an online animated video on the STOP technique at https://www.youtube.com/watch?v=EiuTpeu5xQc
After viewing the video, consider how you can incorporate the technique into your work.

Mindfulness practice has been explored as a technique to reduce activation or triggering of implicit bias, enhance awareness of and ability to control implicit biases that arise, and increase capacity for compassion and empathy toward patients by reducing stress, exhaustion, and compassion fatigue. One study examined the effectiveness of a loving-kindness meditation practice training in improving implicit bias toward African Americans and unhoused persons. One hundred one non-Black adults were randomized to one of three groups: a six-week loving-kindness mindfulness practice, a six-week loving-kindness discussion, or the waitlist control. The IAT was used to measure implicit biases, and the results showed that the loving-kindness meditation practice decreased levels of implicit biases toward both groups. There is also some novel evidence that mindfulness may have neurologic implications. For example, one study showed decreased amygdala activation after a mindfulness meditation. However, additional studies are required in this area before conclusions can be reached.

Counter-Stereotypical Imaging: Counter-stereotypical imaging approaches involve presenting an image, idea, or construct that is counter to the oversimplified stereotypes typically held regarding members of a specific group. In one study, participants were asked to imagine either a strong woman (the experimental condition) or a gender-neutral event (the control condition). Researchers found that participants in the experimental condition exhibited lower levels of implicit gender bias. Similarly, exposure to female leaders was found to reduce implicit gender bias. Whether via increased contact with stigmatized groups to contradict prevailing stereotypes or simply exposure to counter-stereotypical imaging, it is possible to unlearn associations underlying various implicit biases. If the social environment is important in priming positive evaluations, having more positive visual images of members in stigmatized groups can help reduce implicit biases. Some have suggested that even just hanging photos and having computer

screensavers reflecting positive images of various social groups could help to reduce negative associations.

The effectiveness of implicit bias training and interventions has been scrutinized. In a 2019 systematic review, different types of implicit bias reduction interventions were evaluated. A meta-analysis of empirical studies published between May 2005 and April 2015 identified eight different classifications of interventions:

1. Engaging with others' perspectives, consciousness-raising, or imagining contact with outgroup: Participants either imagine how the outgroup thinks and feels, imagine having contact with the outgroup, or are made aware of the way the outgroup is marginalized or given new information about the outgroup.
2. Identifying the self with the outgroup: Participants perform tasks that lessen barriers between themselves and the outgroup.
3. Exposure to counter-stereotypical exemplars: Participants are exposed to exemplars that contradict negative stereotypes of the outgroup.
4. Appeal to egalitarian values: Participants are encouraged to activate egalitarian goals or think about multiculturalism, cooperation, or tolerance.
5. Evaluative conditioning: Participants perform tasks to strengthen counter-stereotypical associations.
6. Inducing emotion: Emotions or moods are induced in participants.
7. Intentional strategies to overcome biases: Participants are instructed to implement strategies to over-ride or suppress their biases.
8. Pharmacotherapy

Interventions found to be the most effective were, in order from most to least:

1. Intentional strategies to overcome biases
2. Exposure to counter-stereotypical exemplars
3. Identifying self with the outgroup
4. Evaluative conditioning
5. Inducing emotions

In general, the sample sizes were small. It is also unclear how generalizable the findings are, given many of the research participants were college psychology students. The 30 studies included in the meta-analysis were cross-sectional (not longitudinal) and only measured short-term outcomes, and there is some concern about "one shot" interventions, given the fact that implicit biases are deeply embedded. Would simply acknowledging the existence of implicit biases be sufficient to eliminate them? Or would such a confession act as an illusion to having self-actualized and moved beyond the bias? Optimally, implicit bias interventions involve continual practice to address deeply habitual implicit biases or interventions that target structural factors.

Role of Interprofessional Collaboration and Practice: The study of implicit bias is appropriately interdisciplinary, representing social psychology, medicine, health psychology, neuroscience, counseling, mental health, gerontology, LGBTQ+ studies, religious studies, and disability studies. Therefore, implicit bias empirical research and curricula training development lends itself well to interprofessional collaboration and practice (ICP).

One of the core features of IPC is sharing—professionals from different disciplines share their philosophies, values, perspectives, data, and strategies for planning of interventions. IPC also involves the sharing of roles, responsibilities, decision making, and power. Everyone on the team employs their expertise, knowledge, and skills, working collectively on a shared, patient-centered goal or outcome. Another feature of IPC is interdependency. Instead of working in an autonomous manner, each team member's contributions are valued and maximized, which ultimately leads to synergy. At the heart of this are two other key features: mutual trust/respect and communication. In order to share responsibilities, the differing roles and expertise are respected.

Experts have recommended that a structural or critical theoretical perspective be integrated into core competencies in healthcare education to teach students about implicit bias, racism, and health disparities. This includes:

- Values/ethics: The ethical duty for health professionals to partner and collaborate to advocate for the elimination of policies that promote the perpetuation of implicit bias, racism, and health disparities among marginalized populations.
- Roles/responsibilities: One of the primary roles and responsibilities of health professionals is to analyze how institutional and organizational factors promote racism and implicit bias and how these factors contribute to health disparities. This analysis should extend to include one's own position in this structure.
- Interprofessional communication: Ongoing discussions of implicit bias, perspective taking, and counter-stereotypical dialogues should be woven into day-to-day practice with colleagues from diverse disciplines.
- Teams/teamwork: Health professionals should develop meaningful contacts with marginalized communities in order to better understand whom they are serving.

IMPACT OF IMPLICIT BIAS ON THE HEALTHCARE WORKPLACE

Without awareness and subsequent intervention through programs like an implicit bias training program or unconscious bias training, implicit biases can negatively affect diversity and productivity in the workplace. They can lead to unfair judgment or treatment of colleagues and hinder the decision-making process.

How implicit bias affects employee selection and treatment

Implicit bias can play a significant role in employee selection processes, leading to preferential treatment or discrimination against certain individuals or groups. For example, individuals with certain ethnic backgrounds or gender may face unfair treatment during hiring, promotion, or performance evaluation processes due to the influence of implicit bias. Implicit biases can certainly interfere with the recruitment process. It can sway the decision-maker to favor candidates who look like them, come from the same background, or share the same beliefs. This not only leads to homogeneous teams but also deprived companies of the innovative ideas that diversity brings. A gender equity program can help to mitigate such biases and ensure fair treatment for all applicants and employees. It promotes understanding and tolerance of differences, thereby improving morale and reducing incidents like sexual harassment and other problematic behaviors in the workplace.

Implicit bias and decision-making processes

Implicit bias can also affect the decision-making process within the workplace. It can influence the evaluation of ideas, the allocation of resources, and the distribution of opportunities. This can limit the diversity of perspectives and hinder innovation and growth within an organization. When it comes to decision-making, implicit bias causes people to rely on unverified assumptions and stereotypes. This

behavior not only damages relationships among colleagues but also stunts growth and innovation. Unconscious bias training can help employees and managers understand their biases, providing them with tools to make objective decisions.

The toll of implicit bias on workplace diversity and productivity

The presence of implicit bias in the workplace can lead to reduced workplace diversity and productivity. Employees who are affected by bias may feel marginalized, excluded, and undervalued, leading to decreased engagement and motivation. This can ultimately impact the overall success and profitability of the organization. Implying biased views limits the variety of perspectives and experiences within a team, thus preventing the team from realizing its full potential. Most importantly, segregating employees based on biased views can lead to diminishing trust, increasing potential conflicts, and ultimately slowing down productivity. Therefore, creating a bias-free, inclusive work environment is not just ethically correct, but also financially beneficial.

Strategies for mitigating implicit bias in the workplace

Implicit bias in the workplace is a pervasive issue that can influence decision-making processes, employee selection, and overall productivity. Despite its subtlety, the implications of implicit bias can be detrimental, leading to a lack of diversity and potentially perpetuating prejudice and sexual harassment. How, then, can we counter this implicit prejudice and foster an environment of inclusion? Let's delve into the strategies that can help.

Awareness and Acknowledgement: The First Steps in Addressing Implicit Bias

Acknowledging and creating awareness about the existence and impact of implicit bias is the initial step in addressing it. This involves educating employees about implicit bias, promoting self-reflection, and fostering an open and inclusive culture where bias can be openly discussed and challenged. The first step in mitigating implicit bias is acknowledging its existence. We all harbor unconscious biases, and denying them only serves to perpetuate the problem. Individuals can take an Implicit Association Test to unveil these hidden biases and trigger the first step towards personal growth and organizational change. Following this, spreading awareness through inclusion training or a bias training program within the organization can serve to enlighten employees about the reality and impact of implicit bias in the workplace. This understanding sets the foundation for developing empathy and initiating actions to reduce bias.

Implementing Unbiased Hiring and Performance Evaluation Practices

Organizations should establish and implement unbiased hiring and performance evaluation practices to ensure fair treatment and decision-making processes. This includes conducting blind evaluations, using objective criteria, and providing unconscious bias training for interviewers and evaluators. Implicit bias can significantly distort the hiring and employee evaluation processes. One way to avert this is by making these processes as objective as possible. Unbiased hiring can be achieved by anonymizing resumes, using structured interviews, and implementing transparent criteria for evaluation. For performance evaluations, a regular and methodical review process that focuses on quantifiable achievements and behaviors can help interrupt unconscious bias. Soliciting feedback from multiple sources also ensures a fair and comprehensive review which limits the potential for implicit prejudices to skew judgement.

Regular Training and Workshops

Regular training and workshops on implicit bias should be conducted to increase awareness and understanding throughout the organization. These initiatives can help employees recognize their own biases, develop strategies to overcome them, and create a more inclusive and equitable workplace environment. An effective implicit bias training program is integral to managing unconscious biases.

Regular workshops can educate employees on types of biases and their impact, while equipping them with skills to counteract these biases. Sensitivity training can also touch on topics like sexual harassment, creating a safer and more inclusive environment in the workplace. Besides training, employees should also have access to resources that will help them uncover and understand their own biases. For instance, Harvard's Project Implicit offers an Implicit Association Test that helps individuals recognize their unconscious biases.

Create a Culture of Inclusivity

Building a culture of inclusivity involves encouraging varied perspectives, open communication, and respect for all individuals regardless of their background. Doing so helps to dispel stereotypes and diminish the impact of implicit bias. Diversity training and awareness programs are essential to fostering such a culture, as they recognize the value of each employee's uniqueness and promote mutual respect.

CASE STUDY #1

Adopting approaches from the fields of education, gender studies, sociology, psychology, and race/ethnic studies can help build curricula that represent a variety of disciplines. Individuals can learn about and discuss implicit bias and its impact, not simply from a health outcomes perspective but holistically. Skills in problem-solving, communication, leadership, and teamwork should be included, so students can effect positive social change.

A 66-year-old Hispanic male resides in a rural community. He contacts their primary care provider's (PCP) office with the following complaints: temperature 100.2 degrees Fahrenheit x three days, headache, body ache, fatigue, nasal congestion with a runny nose. They underwent a Covid-19 polymerase chain reaction (PCR) test at their local pharmacy yesterday, received their positive test result today, and are anxious to speak to their PCP about treatment.

Intervention/Strategies: A telehealth appointment is conducted with their PCP. The patient's condition warrants community-based treatment, and strategies are discussed. The patient specifically asks about medication to cure Covid-19. They had heard about it from a friend and believe that many people get it through their local livestock supply store. Their PCP responds that they understand from speaking with other local health care professionals that some are recommending Ivermectin therapy, which coincidentally is available for livestock. The PCP proceeds to write that prescription to be filled at the pharmacy.

Discussion of Outcomes: The Centers for Disease Control and Prevention (CDC, 2021) reports that the US Food and Drug Administration has not authorized the use of Ivermectin for the prevention or treatment of COVID-19. Likewise, Ivermectin has not been recommended by the National Institutes of Health's COVID-19 Treatment Guidelines Panel for treatment of COVID-19. The PCP's decision to prescribe this medication appears to be influenced by their implicit bias (IB) to conform with their patient's request and some colleagues' anecdotal treatment recommendations. It is not an evidence-based treatment decision. Rather, the treatment decision is consistent with conformity bias, a type of implicit bias.

Strengths and weaknesses of the approach used in the case: Typically, health care professionals intend to provide optimal care to all patients, but IB may negatively impact their aim. IB is the human tendency to make decisions outside of conscious awareness and based on inherent factors rather than evidence (Fitzgerald & Hurst, 2017). Conformity bias is a type of IB associated with the tendency to be influenced by other people's views (Brecher, 2021).

CASE STUDY #2

An African American man with a history of diabetes, hypertension, stroke, and a recent fall at home presented to the emergency room early one evening. He had a cursory evaluation at triage and was provided a wheelchair to sit in as he waited to be seen. After an hour of waiting, he was given a container to collect urine. Despite limited mobility, he walked himself to the restroom without assistance, collected the urine, and found his way back to the wheelchair where he waited. Hours passed; other patients with apparent less acute presentations were walked back and seen as he sat in his wheelchair; no one checked on him. Eventually, despite feeling reluctant to speak up for fear of displeasing the nurse and receiving hostility, he tried to get the attention of the desk nurse to determine when he'd be seen and asked for pain medication for a growing headache. The nurse spoke in an uncaring and loud voice, telling him that the ER was too busy to deal with this and that he needed to wait for his turn. She added that he was fine and didn't need pain medication. He asked if they could call his son and ask him to pick him up, but the nurse walked away without responding.

After several more hours of sitting and not being cared for, he felt unsafe and asked if he could call his son to pick him up. The nurse told him that there was nothing wrong with him and if he wanted to call to be picked up, that was up to him. Eight hours later, the first and only call that was placed to the son was from his father. Through slurred and weakened speech, his father asked to be picked up. When the son arrived, his father was outside sitting at the curb unattended and in a wheelchair. He was confused, weak and crying. They left for home, discouraged and distrustful of whether quality care would be received.

Early the next morning, hours after leaving the ER, the father appeared by ambulance at the ER, once again, after having suffered a severe stroke.

Identify the instances of health inequity and implicit bias in this case example.

- As other patients were seen, the patient languished in the emergency room without further assessment, interaction, communication, or care. Disproportionately long waiting time for people of color is one way in which institutional racism can manifest in an organization's structures, rules and norms. Institutional racism has been defined as "differential access to the goods, services, and opportunities of society by race... It is structural, having been codified in our institutions of custom, practice, and law..." This can have a negative impact on provision of care and health outcomes for patients.
- The uncaring disregard with which the nurse engaged the patient illustrates how unconscious stereotypes or attitudes about a person, implicit bias, can be expressed in active disparity in the provision of care. Implicit bias is defined as "the attitudes or stereotypes that affect our understanding, actions and decisions in an unconscious manner." Research has shown this can lead to differential treatment of patients by race, gender identity, weight, age, language, sexual orientation, income, and insurance status. Ignoring, disbelieving, or having contempt for the patient's experience of pain is a known manifestation of implicit bias towards patients of color, which can result in fear and reluctance to speak up when needs are not met.
- The dismissing, disrespectful, disbelieving behavior of the nurse can foster further reluctance to speak up and overall doubt that quality care will be received, widening the gap in which health care may be distrusted and not sought by patients of color.
- After the long wait time, cursory assessment, poor communication and other failures in patient-centered care, the patient lost confidence in the ability to receive beneficial care and treatment and made the decision to disengage from seeking care despite worsening symptoms. Research has shown

that implicit or subconscious bias can negatively affect whether patients will subsequently return for services at the organization – with potentially detrimental consequences in terms of health outcomes.
- The lack of confidence built upon experiences of this kind or previous interactions can be perpetuated and affect a patient's willingness to seek health care in the future – leading to further widening of disparities in care.
- The mistrust and lost confidence that can occur when a caregiver does not believe the symptoms and complaints of patients of color can lead to worsening symptoms and ultimately poorer outcomes – further widening the disparity gap.

Discussion/Action Plan
- Recognizing a significant need to transform its approach to health equity, the organization made health equity a strategic priority at a system-level and identified eliminating racism and decreasing health disparity as core values. The organization performed a self-assessment to understand its current racial climate and focus on health equity, cultural competence, and patient-centered care. Using the IHI Health Equity Self-Assessment Tool for Health Care Organizations, the organization evaluated and developed improvement strategies around 5 strategic components:
    1. Make health equity a strategic priority.
    2. Develop structure and processes to support health equity work.
    3. Deploy specific strategies to address the multiple determinants of health on which health care organizations can have a direct impact, such as health care services, socioeconomic status, physical environment, and healthy behaviors.
    4. Decrease institutional racism within the organization.
    5. Develop partnerships with community organizations to improve health and equity
- The organization implemented mandatory annual training to develop cultural competencies regarding equitable, respectful, and caring engagement of all patients, families, and care partners.
- It also incorporated training for individuals to self-assess their own bias (implicit bias) to recognize and incorporate strategies and skills (such as perspective-taking) to mitigate its effects.
- The organization improved its incident reporting capabilities to adequately capture incidents regarding health inequity, disparity, and/or racism whether subtle or overt, and to establish targeted solutions for remediation and improvement for areas of concern.

CONCLUSION

Implicit bias is the unconscious and therefore unintentional human tendency to make decisions based on inherent factors rather than evidence. No one is immune, not even health care professionals. It is clear that most people in the general population hold implicit biases, and health professionals are no different. Recognizing common types of IB by building self-awareness and participating in voluntary or mandatory training are steps that health professionals may take to minimize its impact on their care. While there continue to be controversies regarding the nature, dynamics, and etiology of implicit biases, it should not be ignored as a contributor to health disparities, patient dissatisfaction, and suboptimal care. More research is needed to measure how IB training may change health providers' short- and long-term beliefs, practices, and patients' perceptions. Ultimately, these steps are intended to minimize IB among health care providers, reduce barriers to equitable care, close the gap in health disparities between diverse populations, and meet patients' needs.

RESOURCES

American Bar Association Diversity and Inclusion Center Toolkits and Projects
https://www.americanbar.org/groups/diversity/resources/toolkits

National Implicit Bias Network
https://implicitbias.net/resources/resources-by-category

The Ohio State University The Women's Place: Implicit Bias Resources
https://womensplace.osu.edu/resources/implicit-bias-resources

The Ohio State University Kirwan Institute for the Study of Race and Ethnicity
http://kirwaninstitute.osu.edu

University of California, Los Angeles Equity, Diversity, and Inclusion: Implicit Bias
https://equity.ucla.edu/know/implicit-bias

University of California, San Francisco, Office of Diversity and Outreach Unconscious Bias Resources
https://diversity.ucsf.edu/resources/unconscious-bias-resources

Unconscious Bias Project
https://unconsciousbiasproject.org

University of California, San Diego Center for Mindfulness
https://medschool.ucsd.edu/som/fmph/research/mindfulness

University of California, Los Angeles Guided Meditations
https://www.uclahealth.org/marc/mindful-meditations

Mindful: Mindfulness for Healthcare Professionals
https://www.mindful.org/mindfulhome-mindfulness-for-healthcare-workers-during-covid

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POST-TEST

1. Implicit bias can impact which of the following in healthcare?
   a) Clinical communications
   b) Clinical interactions
   c) Diagnostic and treatment decision-making
   d) All of the above

2. TRUE or FALSE: Implicit bias refers to the unconscious attitudes and evaluations held by individuals. The person may not necessarily endorse the bias, but the embedded beliefs/attitudes can negatively affect behaviors.

3. Social characteristics that may trigger implicit bias include all but which of the following?
   a) Obesity
   b) Amount of time someone lived in a community
   c) Race
   d) Sexual orientation, gender identity, or gender expression

4. Which of these is not a type of implicit bias?
   a) Outward
   b) Confirmation
   c) Anchoring
   d) Halo

5. TRUE or FALSE: Cultural humility refers to an attitude of humbleness, acknowledging one's limitations in the cultural knowledge of groups.

6. Risk factors that are associated with an increased risk for certain implicit biases include which of the following?
   a) Stressful emotional states (e.g., anger, frustration)
   b) Uncertainty
   c) High-crises environments
   d) All of the above

7. Multidisciplinary health literature indicates that many factors contribute to health disparities including which of the following?
   a) Quality of healthcare
   b) Underlying chronic conditions
   c) Structural racism
   d) Implicit bias
   e) All of the above

8. Which of these is not considered a developmental stage in the model for intercultural sensitivity training?
   a) Defense
   b) Minimization
   c) Accommodation
   d) Adaptation

9. Which of these is not an intervention or strategy designed to reduce implicit bias?
   a) Doing a self-survey
   b) Mindfulness
   c) Individuation
   d) Perspective training

10. TRUE or FALSE: The goal in implicit bias training is to minimize implicit bias among health care providers, reduce barriers to equitable care, close the gap in health disparities between diverse populations, and meet patients' needs.

The post-test and corresponding course evaluation can be accessed at:
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If all course requirements have been met, a certificate will be emailed from Select Rehabilitation to the email address reported in the course follow-up survey.

Any questions or issues related to this course should be directed to Dr. Kathleen Weissberg, National Director of Education for Select Rehabilitation at kweissberg@selectrehab.com