Implicit Bias in Health Care

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Faculty

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Faculty Disclosure

Contributing faculty, Alice Yick Flanagan, PhD, MSW, has disclosed no relevant financial relationship with any product manufacturer or service provider mentioned.

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Audience

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Course Objective

The purpose of this course is to provide dental professionals with an overview of the impact of implicit biases on clinical interactions and decision making.

Learning Objectives

Upon completion of this course, you should be able to:

1. Define implicit and explicit biases and related terminology.
2. Evaluate the strengths and limitations of the Implicit Association Test.
3. Describe how different theories explain the nature of implicit biases, and outline the consequences of implicit biases.
4. Discuss strategies to raise awareness of and mitigate or eliminate one's implicit biases.

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 [1]. Today, some states have passed legislation requiring certain health professionals to take implicit bias training. This ultimately sends a message that biases, racial inequities, and disparities continue to exist in the healthcare system and should be addressed [39]. 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 [2; 3].

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 [4]. In health contexts, this is problematic because clinical judgments can be biased and adversely affect health outcomes. The Joint Commission provides the following example [3]:

> 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.

The purpose of this course is to provide health 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.

DEFINITIONS OF IMPLICIT BIAS AND OTHER TERMINOLOGIES

IMPLICIT VS. EXPLICIT BIAS

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 [5; 101]. These individuals are generally uninterested in changing their biases [102]. For example, an individual may openly endorse a belief that women are weak and men are strong. This bias is fully conscious and is made explicitly known. The individual's ideas may then be reflected in his/her work as a manager.

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 [6]. 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 [2; 7; 8; 9; 102]. They are automatically activated, and an individual may not even be aware that these biases affect their behaviors and communication patterns [101]. Some have asserted that the cognitive processes that dictate implicit and explicit biases are separate and independent [9].

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 [10]. 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 [11]. According to Georgetown University's National Center on Cultural Competency, social characteristics that can trigger implicit biases include [12]:

- 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

For example, studies have shown that implicit biases regarding pain experiences of Black patients and treatment adherence by patients with obesity continue to exist in health care. In one study, health professionals demonstrated less respect for patients with higher body mass index (BMI) [102]. These implicit biases affect how clinicians interact with patients, manage conditions, structure treatment protocols, and express empathy [103].

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 [6; 13]. Disadvantaged groups are marginalized in the healthcare system and vulnerable on multiple levels; health professionals' implicit biases can further exacerbate these existing disadvantages [13].

When the concept of implicit bias was introduced in the 1990s, it was thought that implicit biases could be directly linked to behavior. Despite the decades of empirical research, many questions, controversies, and debates remain about the dynamics and pathways of implicit biases [2].

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 [14]. It has also been defined as a process between the patient and practitioner based on how patients identify and respond to their experiences based on their worldviews and cultural values when they seek help and then receive care [104]. The acquisition of cultural competence 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 [15]. Cultural humility is a lifelong process involving reflexivity, self-evaluation, and self-critique [16]. Experts have identified five attributes of cultural humility: openness, self-awareness, egoless, supportive interaction, and self-reflection and critique [105].

Discrimination

Discrimination has traditionally been viewed as the outcome of prejudice [17]. It encompasses overt or hidden actions, behaviors, or practices of members in a dominant group against members of a subordinate group [18; 106]. 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 [19].

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" [20]. Diversity is often conceptualized into singular dimensions as opposed to multiple and intersecting diversity factors [21].

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 [22].

Prejudice

Prejudice is a generally negative feeling, attitude, or stereotype against members of a group [23]. 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" [23]. Prejudice stems from the process of ascribing every member of a group with the same attribute [24].

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 [25]. 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 [26]. Historically, the U.S. Census has defined race according to ancestry and blood quantum; today, it is based on self-classification [26].

There are scholars who assert that race is socially constructed without any biological component [27]. For example, racial characteristics are also assigned based on differential power and privilege, lending to different statuses among groups [28].

Stereotype

A stereotype is a general association of particular attributes or characteristics to a collective or social group [106]. Positive and negative stereotypes exist related to most individual attributes.

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" [29]. 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 [30]. 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 [31; 32].

MEASUREMENT OF IMPLICIT BIAS: A FOCUS ON THE IAT

Project Implicit is a research project sponsored by Harvard University and devoted to the study and monitoring of implicit biases. It houses the Implicit Association Test (IAT), which is one of the most widely utilized standardized instruments to measure implicit biases. 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 [33]. 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 [34; 35; 107]. Since 2006, more than 4.6 million individuals have taken the IAT, and results indicate that the general population holds implicit biases [3]. By late 2023, more than 80 million study sessions had been conducted and more than 40 million IATs completed at the Project Implicit website [107].

interactive activity

Visit https://implicit.harvard.edu/implicit and complete an assessment. Does it reflect your perception of your own biases? Did you learn anything about yourself?

Measuring implicit bias is complex, because it requires an instrument that is able to access underlying unconscious processes. While many of the studies on implicit biases have employed the IAT, there are other measures available. They fall into three general categories: the IAT and its variants, priming methods, and miscellaneous measures, such as self-report, role-playing, and computer mouse movements [36]. This course will focus on the IAT, as it is the most commonly employed instrument. It is also important to note that the IAT is more a procedure and less a discrete measurement, because there is not a single IAT. Instead, each specific dimension (e.g., race, gender, age, disability) has its own set of items. After completing the IAT, respondents are provided with results regarding their measured preference such as: "Your responses suggested a strong automatic preference for White people over Black people" [108]. The key term here is "preferences," which does not necessarily mean implicit bias or negativity.

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 [37]. There is also concern with its validity in specific arenas, including jury selection and hiring [37]. Some also maintain that the IAT is sensitive to social context and may not accurately predict behavior [37]. 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 [38].

EXTENT OF IMPLICIT BIASES AND RISK FACTORS

Among the more than 40 million participants who have completed the IAT at the Project Implicit website, individuals generally exhibited implicit preference for White faces over Black or Asian faces. In addition, there is a general preference for heterosexual people over gay individuals, young over old individuals, thin over obese people, and cisgender over gender and sexual minorities (LGBTQ+) [107]. The Pew Research Center also conducted an exploratory study on implicit biases, focusing on the extent to which individuals adhered to implicit racial biases [40]. 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 [41]. Researchers found that resumes with White-sounding names were 50% more likely to receive callbacks than resumes with African American-sounding names [41]. 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 [42]. 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. In a scoping review of studies around the world, researchers identified 87 studies that assessed unconscious biases among healthcare professionals [109]. Racial implicit biases were most frequently studied. Physicians and nurses were included in the majority of the studies. Analysis of the included studies indicates that implicit biases remain prevalent among healthcare providers.

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 [43]. 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 BMI predicted holding these implicit biases.

Certain conditions or environmental risk factors are associated with an increased risk for certain implicit biases, including [44; 45; 106]:

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

THEORETIC EXPLANATIONS AND CONTROVERSIES

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.

SOCIAL PSYCHOLOGICAL AND COGNITIVE THEORETICAL FRAMEWORKS

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 [46]. This is referred to as implicit social cognition. From this perspective, implicit biases are automatic expressions based on belonging to certain social groups [47]. The IAT is premised on the role of implicit memory and past experiences in predicting behavior without explicit memory triggering [48].

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 [49]. Heuristics are essentially mental short cuts that facilitate (usually unconscious) rules that promote automatic processing [50]. 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 [51]. When a heuristic is activated, an implicit memory or bias may be triggered simultaneously [47]. This is also known as the dual-process model of information processing [50].

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 [52]. Behavior is biased if it is influenced by social cues indicating the social group to which someone belongs [52]. 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 [52]. Rather than viewing implicit bias as an invisible force (i.e., unconscious cognitive structure), it is considered a normal behavior [53].

NEUROSCIENTIFIC PERSPECTIVES

Implicit bias has neuroscientific roots as well and has been linked to functions of the amygdala [2; 54]. 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 [55]. 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 [54]. This speaks to the role of socialization in the developmental process [54].

It may be that the activation of the amygdala is an evolutionary threat response to an outgroup [56]. 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 [56]. 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 [2].

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 [9; 57; 106]. 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 [58; 106]. 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 [9; 57].

In response to this conflict, a systems-based practice has been proposed [59]. 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 [59].

Implicit bias is not a new topic; it has been discussed and studied for decades in the 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 BIASES

HEALTH DISPARITIES

Implicit bias has been linked to a variety of health disparities [1]. Health disparities are differences in health status or disease that systematically and adversely affect less advantaged groups [60]. 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 [61]. Healthy People 2030 defines a health disparity as [62]:

> ...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.

As noted, in 2003, the Institute of Medicine implicated implicit bias in the development and continued health disparities in the United States [1]. 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 [63]. Hypertension, diabetes, and obesity are more prevalent in non-Hispanic Black populations compared with non-Hispanic White groups (25%, 49%, and 59% higher, respectively) [64]. 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 [65]. This places African American and Latina women at greater risk of infection and maternal mortality.

One of the most salient statistics that highlights racial health disparities is in maternal morbidity and mortality rates. In the United States, Black patients are 212% more likely than White patients to die from pregnancy- or childbirth-related causes [110]. In addition, during the COVID-19 pandemic, evidence of racial health disparities was widespread. People of color were hospitalized for COVID at 4.7 to 5.3 times the rate of White Americans [110].

Gender health disparities have also been demonstrated. Generally, self-rated physical health (considered one of the best proxies to health) is poorer among women than men. Depression is also more common among women than men [66]. Lesbian and bisexual women report higher rates of depression and are more likely than non-gay women to engage risk behaviors such as smoking and binge drinking, perhaps as a result of LGBTQ+-related stressors. They are also less likely to access healthcare services [67].

Socioeconomic status also affects health care engagement and quality. In a study of patients seeking treatment for thoracic trauma, those without insurance were 1.9 times more likely to die compared with those with private insurance [68].

CLINICAL DECISIONS AND PROVIDER-PATIENT INTERACTIONS

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 [6; 69]. 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 [69]. For example, physicians have been shown to minimize Black patients' pain, ignore their complaints, and spend less time in examination rooms with them [111]. In a 2021 study, physicians were more likely to expect Black patients would not adhere to an HIV pre-exposure prophylaxis medication compared with White patients [112]. As a result, physicians were less likely to discuss available regimens with Black patients.

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 [7]. The adverse consequences of implicit biases between patients and practitioners emerge in the following areas [106]:

- Communication
- Relationship
- Patient satisfaction and patient's view toward provider's patient-centeredness
- Treatment adherence and practitioners' views of patient's likelihood to adhere to treatment
- Practitioners' clinical decision-making

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 [70]. 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 [70]. 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.

PATIENTS' PERCEPTIONS OF CARE

It has been hypothesized that providers' levels of bias affect the ratings of patient-centered care [34]. 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 [71]. 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 [72]. 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 [72].

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 [73]. 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 [73]:

> 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 [73]:

> 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.

DEVELOPMENTAL MODEL TO RECOGNIZING AND REDUCING IMPLICIT BIAS

There are no easy answers to raising awareness and reducing health providers' implicit bias. Each provider 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 [74; 75]. 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 [74]. This developmental model includes six stages:

- 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.
- Defense: In this stage, the person may accept that implicit biases exist but does not acknowledge that implicit biases exist within themselves.
- 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.
- Acceptance: In the acceptance stage, the individual recognizes and acknowledges the role of implicit biases and how implicit biases influence interactions with patients.
- 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, these people begin to actively work to reduce the potential impact of implicit biases on interactions with patients.
- 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

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 [76]. This may manifest as yelling, demonstrations of anger, or crying or leaving the room or withdrawing and remaining silent [76]. Some experts have recommended an exercise involving index cards on which "honest inquiry" is written on one side and "honest response" is written on the other [113]. Learners can then hold up the side of the index card to facilitate questions and seek responses from everyone.

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 [76]. When psychological safety is threatened, individuals' energies are primarily expended on coping rather than learning [76]. As such, interventions should not seek to confront individuals or make them feel guilty and/or responsible [77].

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 [77]. The principles of respect, integrity, and confidentiality should be communicated [77]. Facilitators who demonstrate attunement, authenticity, and power-sharing foster positive and productive dialogues about subjects such as race and identity [76]. 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 [76]. 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 [76]. Finally, power-sharing entails redistributing power in the learning environment. The education environment is typically hierarchical, with an expert holding more power than students or participants. Furthermore, other students may hold more power by virtue of being more comfortable speaking/interacting [76]. Ultimately, promoting a safe space lays a foundation for safely and effectively implementing implicit bias awareness and reduction interventions.

STRATEGIES TO PROMOTE AWARENESS OF IMPLICIT BIAS

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 [79]. 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 [80]. 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 the SOAP 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.

Experts have also formulated questions for each of the three stages of reflection to help increase awareness when guiding nursing students through learning about implicit biases [114; 115]:

- Awareness: Recall a patient who you considered challenging, difficult, or uncomfortable to be around.
- Critical analysis: Do I or did I have an automatic feeling or judgment about this person? Am I being reminded of someone? What is this person triggering in my background?
- New perspective: How might I consciously intervene to mitigate the impact of this bias? What can I do differently when similar thoughts, feelings, or emotions arise?

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 [81]. Any feedback, education, and discussions should be structured to minimize participant defensiveness [81].

INTERVENTIONS TO REDUCE IMPLICIT BIASES

Interventions or strategies designed to reduce implicit bias may be further categorized as change-based or control-based [58]. 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 [58]. These strategies include increasing awareness of biased thoughts and responses. The two types of interventions are not mutually exclusive and may be used synergistically. In a similar vein, interventions targeted on implicit biases may be categorized as either those that "de-bias" or neutralize or that raise awareness [116].

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 [82; 117]. The goal is to increase psychological closeness and empathy, anticipate others' feelings and reactions, and facilitate connection with members of the group [4; 117]. 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 [83]. However, one of the critiques to perspective taking is that instead of highlighting similarities, differences can be emphasized and could result in reinforced stereotypes [117].

interactive activity

Consuming media that presents a viewpoint and life experience different from your own can help minimize implicit biases. Visit the following sites 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/lgbt-staff-picks

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 [77]. 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 [84]. 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 [85].

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 [4; 82]. The key is to concentrate on the person's specific and unique 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 [118]. Teaching individuals to pause and take time to ask questions instead of relying on assumptions is vital [118]. 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 [69].

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 [86]. There is evidence that mindfulness can help regulate biological and emotional responses and can have a positive effect on attention and habit formation [4]. 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 [4; 87]. Research indicates that there are two main types of mindfulness practice [119]. The first is general mindful practice, which includes interventions that promote awareness to the individual in the present moment through current body sensation and emotional states. The second type is loving-kindness meditation, which entails individuals thinking of another person (from out-group or in-group) and sending love to them and to the self. The goal of this type of practice is to promote empathy and compassion to another person or persons.

Mindfulness approaches include yoga, meditation, and guided imagery. Additional resources to encourage a mindfulness practice are provided later in this course.

An approach to mindfulness using the acronym STOPP has been developed as a practical exercise to engage in mindfulness in any moment. STOPP is an acronym for [88]:

- Stop
- Take a breath
- Observe
- Pull back
- Practice

interactive activity

Visit the following website to view a short, animated video on the STOPP technique. After viewing the video, consider how you can incorporate the technique into your work.

https://www.youtube.com/watch?v=tStXi7f7Vgk

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 [89].

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 [90].

There is also some novel evidence that mindfulness may have neurologic implications. For example, one study showed decreased amygdala activation after a mindfulness meditation [91]. 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 [120]. In one study, participants were asked to imagine either a strong woman (the experimental condition) or a gender-neutral event (the control condition) [92]. 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 [93]. 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 [94]. Inviting speakers whose demographic background is different from staff or other invited presenters is also a good practice [120]. 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 [94].

EFFECTIVENESS OF IMPLICIT BIAS INTERVENTIONS

The effectiveness of implicit bias trainings 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 [13]:

- 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.
- Identifying the self with the outgroup: Participants perform tasks that lessen barriers between themselves and the outgroup.
- Exposure to counter-stereotypical exemplars: Participants are exposed to exemplars that contradict negative stereotypes of the outgroup.
- Appeal to egalitarian values: Participants are encouraged to activate egalitarian goals or think about multiculturalism, cooperation, or tolerance.
- Evaluative conditioning: Participants perform tasks to strengthen counter-stereotypical associations.
- Inducing emotion: Emotions or moods are induced in participants.
- Intentional strategies to overcome biases: Participants are instructed to implement strategies to over-ride or suppress their biases.
- Pharmacotherapy

Interventions found to be the most effective were, in order from most to least, [13]:

- Intentional strategies to overcome biases
- Exposure to counter-stereotypical exemplars
- Identifying self with the outgroup
- Evaluative conditioning
- Inducing emotions

For implicit bias interventions to be effective, they must be grounded in social psychological theories and incorporate perspective taking, building partnerships, and emotional regulation (e.g., mindfulness) to help reduce stress [39].

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 [95; 96]? Or would such a confession act as an illusion to having self-actualized and moved beyond the bias [95]? Others have questioned the effectiveness interventions to reduce implicit biases on a long-term basis and suggest that institutional strategies to identify and address biases may be more effective [121]. One example is the University of Washington's School of Medicine's online reporting mechanism, which allows individuals who are either third-party observers or who are targets to report issues. When necessary, follow-up to reported incidents are conducted by human resources.

Optimally, implicit bias interventions involve continual practice to address deeply habitual implicit biases or interventions that target structural factors [95; 96].

ROLE OF INTERPROFESSIONAL COLLABORATION AND PRACTICE AND IMPLICIT BIASES

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 [13]. Therefore, implicit bias empirical research and curricula training development lends itself well to interprofessional collaboration and practice (ICP).

One of the core features of ICP is sharing—professionals from different disciplines share their philosophies, values, perspectives, data, and strategies for planning of interventions [97]. ICP also involves the sharing of roles, responsibilities, decision making, and power [98]. Everyone on the team employs their expertise, knowledge, and skills, working collectively on a shared, patient-centered goal or outcome [98; 99].

Another feature of ICP is interdependency. Instead of working in an autonomous manner, each team member's contributions are valued and maximized, which ultimately leads to synergy [97]. At the heart of this are two other key features: mutual trust/respect and communication [99]. In order to share responsibilities, the differing roles and expertise are respected.

ICP is a powerful tool to mitigate implicit biases. The inherent characteristics of ICP—enhanced communications, trust, and shared decision making—should help reduce implicit biases in the team. At the heart of ICP is also the promotion of equity, which builds in accountability and can facilitate learning about and increased awareness of members' implicit biases [122].

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 [100]. This includes [100]:

- 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.

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 [78]. Students 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 [78].

CONCLUSION

In the more than three decades since the introduction of the IAT, the implicit bias knowledge base has grown significantly. It is clear that most people in the general population hold implicit biases, and health professionals are no different. 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. Given the complex and multifaceted nature of this phenomenon, the solutions to raise individuals' awareness and reduce implicit bias are diverse and evolving.

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

Health Care Access Now
https://healthcareaccessnow.org/implicit-bias-resources

MINDFULNESS RESOURCES

University of California, San Diego
Center for Mindfulness
https://cih.ucsd.edu/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

FACULTY BIOGRAPHY

Alice Yick Flanagan, PhD, MSW, received her Master's in Social Work from Columbia University, School of Social Work. She has clinical experience in mental health in correctional settings, psychiatric hospitals, and community health centers. In 1997, she received her PhD from UCLA, School of Public Policy and Social Research. Dr. Yick Flanagan completed a year-long post-doctoral fellowship at Hunter College, School of Social Work in 1999. In that year she taught the course Research Methods and Violence Against Women to Masters degree students, as well as conducting qualitative research studies on death and dying in Chinese American families. Previously acting as a faculty member at Capella University and Northcentral University, Dr. Yick Flanagan is currently a contributing faculty member at Walden University, School of Social Work, and a dissertation chair at Grand Canyon University, College of Doctoral Studies, working with Industrial Organizational Psychology doctoral students. She also serves as a consultant/subject matter expert for the New York City Board of Education and publishing companies for online curriculum development, developing practice MCAT questions in the area of psychology and sociology. Her research focus is on the area of culture and mental health in ethnic minority communities.

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