Examining an implicit bias assessment tool: Considerations for faculty and clinicians

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Implicit bias is prevalent in healthcare settings and is well documented that it adversely affects health outcomes. As faculty in women's health programs, it is important to understand strategies designed to help mitigate the existence of implicit bias and its subsequent impact. The well-known Implicit Association Test (IAT) is frequently cited in the literature and is often used as a tool to help learners understand their biases. However, there are challenges to consider with the use of this assessment tool in academic settings with students. As faculty exploring ways to address implicit bias among students, it is important to implement a multifactorial approach and not rely on a single strategy to help identify bias.

KEY WORDS: implicit bias, Implicit Association Test, the IAT

Recent events in the United States, such as the murders of George Floyd, Breonna Taylor, and Ahmaud Arbery, have cast a glaring light on inequities against Black people seen in this country. Racism is now a public health crisis despite centuries of public awareness of the prevalence and impact of this social construct. The United States was built on a system of oppression and power toward those who were non-White, including Black and Native Americans. These systemic structures, described as structural racism, have an impact on women's reproductive and maternal and infant healthcare and health outcomes. For example, in the US, the infant mortality rate is twice as high for Black, Hispanic, and American Indian/Native Alaskan infants as it is for non-Hispanic White infants.

We know that American Indian/Native Alaskan and Black women have rates of perinatal death that are 2.5 to 3 times higher compared to their White counterparts, respectively, even when controlling for factors such as education, age, or income levels.[1] Black women have higher death rates from breast cancer and Black and Hispanic women

have higher death rates from cervical cancer than White women.[2] As one aspect in changing these disparities and inequities, faculty in programs for women's health nurse practitioners (WHNPs) and other advanced practice registered nurses (APRNs) that provide women's and gender-related healthcare, we have an obligation to teach the next generation of providers about the role of implicit bias in healthcare and its impact on patients served. As clinicians we have an obligation to engage in continuing education to recognize and address implicit biases within ourselves. In this article, the author focuses on the impact of implicit bias, describes the Implicit Association Test (IAT) commonly used to examine implicit bias, discusses the reliability and validity of this assessment tool, proposes considerations for use of the test in an educational setting, and discusses future implications in examining implicit bias.

The Implicit Association Test

Implicit biases are unconscious attitudes and stereotypes that individuals possess that can be positive or negative, favorable or unfavorable. These biases are known to cause inequities in healthcare and are a subject of great discussion in clinical and academic settings today. Implicit bias is very different from explicit bias. Explicit biases are attitudes and beliefs about which individuals are consciously aware and include the social constructs of racism, ageism, or sexism, to name a few.

One of the most famously known tests to examine implicit bias is the IAT. Founded by researchers at Harvard University, the IAT was designed to test the strength of associations between ideas and evaluations.[3,4] When examining race, for example, if the respondent identifies White people with good things or Black people with bad things, there

is believed to be a positive implicit bias toward individuals who are White and a negative implicit bias toward individuals who are Black. Scores on the IAT are based on participants' response times to answering questions on the test. Participant responses are believed to be easier when they are related to other concepts with a similar response key.[3,4] According to Karpinksi and Hilton, response times are quicker when generally liked items are paired with positive words, in contrast to a slower response time when generally disliked items are paired with positive words.

The IAT has gained increasing popularity in use as society seeks to understand implicit bias and develop strategies to mitigate its existence. Although the Race IAT may be more familiar to learners, there are 14 IAT tests available at https://implicit.harvard.edu/implicit/selectatest.html. A summary of these

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Table. Implicit Association Test (IAT): Summary of types and descriptions[4]

IAT	Description
Arab-Muslim	Differentiates names likely of Arab-Muslims versus other nationalities or religions
Religion	Assesses religious terms from across the world
Skin-tone	Compares light- and dark-skinned faces
Age	Differentiates old and young faces
Gender-Career	Assesses family and career among females and males
Disability	Assesses symbols associated with people with and without disabilities
Presidents	Identifies Joseph Biden and previous presidents
Sexuality	Assesses symbols and words associated with gay and heterosexuals
Gender-Science	Assesses liberal arts and science among females and males
Race	Differentiates faces of European and African origin
Weight	Differentiates faces of obese and thin people
Asian	Differentiates White and Asian faces
Transgender	Differentiates transgender from cisgender celebrities
Weapons	Assesses White and Black faces with images of objects such as weapons

tests and a description are included in the *Table*.[4]

First-year healthcare students have been found to have implicit bias.[5] As faculty, we must review our curriculums to explore early opportunities to talk about this concept with our students and the devastating impact that can occur in the healthcare setting. Race is often the focus of implicit bias training. However, there are many other aspects of diversity that should be included in the learning environment, such as sexuality, gender identity, and age. As one example for age, implicit biases toward women in their 40s who are having a baby may contribute to negative outcomes for the very patients we aim to serve as women's healthcare providers.

Evaluating reliability and validity of the Implicit Association Test

Since Greenwald, McGhee, and Schwartz introduced the IAT in 1998, there have been over 4,717 literature citations, with authors from in and outside of psychology.[6,7] The validity of this test has not been studied extensively, and there is limited literature that explores its reliability of use, with nursing literature being no exception. Attitudes and perceptions of the IAT are well documented but information on how to effectively utilize the IAT is limited. There are concerns with intention, examination, and understanding that are not fully appreciated by end users or facilitators.[8] The IAT studies associations against an evaluative attribute and, if there is a close relationship, there is an implicit bias present.[9] As previously discussed, individuals are quicker to respond when a liked concept is paired with affirmative or positive language, compared to the opposite.[9] Why do individuals tend

to answer questions more quickly with positive language? Researchers suggest a phenomenon called an environmental association model, which describes how individuals respond based on past exposure or experiences.[9] If individuals are frequently exposed to positive role models who are White, there can be a positive association with White people. On the contrary, if individuals are exposed to consistently negative images or actions of Black individuals, there can be a negative association with Black people. As these researchers describe, the IAT is revealing through these associations not simply as a preference for one group over another but rather the amount of positive or negative exposure an individual has had.[9] These preexisting associations will be reflected in IAT scores.[7]

Reliability of a test means that it can consistently achieve its desired intent. Because it is well known that scores on the IAT may vary with repeat testing, reliability is therefore challenged. Validity with the IAT should measure unconscious or implicit attitudes. As individuals gain more awareness of the design of the test and increase their learnings (ie, exposures), it is plausible to consider that the validity of this test may be challenged with individuals who are in different phases of their learning related to the IAT in question. In theory, a health equity

officer may be more attuned to the IAT and respond differently than a freshman college student who grew up in a suburban city where underrepresented groups were less than 10% of the total city population. The following disclaimer is noted at https://implicit.harvard.edu/implicit/takeatest.html:

"In reporting to you results of any IAT test that you take, we will mention possible interpretations that have a basis in research done (at the University of Washington, University of Virginia, Harvard University, and Yale University) with these tests. However, these Universities, as well as the individual researchers who have contributed to this site, make no claim for the validity of these suggested interpretations. If you are unprepared to encounter interpretations that you might find objectionable, please do not proceed further. You may prefer to examine general information about the IAT before deciding whether or not to proceed."

As we consider reliability and validity of the IAT, it is important to recognize the limitations noted with this test. One author reveals that the last assessment of the construct validity of the IAT occurred over 10 years ago and notes that validity of psychological measures can change over time and should be continuously reviewed.[7] The author also notes that the last assessment was made by Greenwald, McGhee, and

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> When **recommending** the IAT as a facilitator, it is **essential** that you have taken the test and have a **thorough understanding** of the **findings**. It will be important to be able to have candid **conversations** with participants about their **thoughts** and **learnings**.

Schwartz, the creators of the IAT. Additionally, because the IAT has gained popularity of use outside of psychology, there is opportunity to review this tool from other perspectives and disciplines.[7] Currently, there are no published nursing assessments on the reliability or validity of the IAT.

Considerations for use: Points to consider

The IAT is not a perfect test despite its popularity of use and reference in the literature. It is important to be mindful of the design of this test and understand that the IAT determines associations to certain items, concepts, or phenomena. Every individual has a different lens or perspective, and lifetime experiences can be highly variable. These variations in experiences can lead to individuals receiving a report on the IAT indicating an implicit bias toward people who are Black, for example, which may be contradictory to what one's inner thoughts and feelings may be. It is important for those who administer the test to be sure that participants understand what the test is designed to measure. Because results may be triggering for some individuals, it is imperative to

provide behavioral health resources to help students or others taking the test self-manage the emotions sparked. Project Implicit provides a Frequently Asked Questions (FAQ) section on their website at https://implicit.harvard.edu/implicit/faqs.html. Referring participants to review these FAQs either before or after taking a test could provide helpful insight for understanding the test and processing the results. The disclaimer regarding the IAT is not often shared when the IAT is recommended and is an area of future consideration. Again, the self-assessment obtained through utilization of this test should be cautioned with additional insight on limitations and questionable validity of results.

When recommending the IAT as a facilitator, it is essential that you have taken the test and have a thorough understanding of the findings. It will be important to be able to have candid conversations with participants about their thoughts and learnings. Results from the IAT are meant to be self-reflective and reports should not be shared with others, so it is not advisable to have students or other participants submit their report. A discussion board posting for asynchronous learning

could be considered to allow participants to share insights on their learnings and next steps for them as students and future APRNs. In the synchronous or live classroom setting, consider time in the class for discussion and be prepared as the faculty member or class facilitator to start the conversation. Of note, many individuals may share their experience using socially acceptable responses, which may be different from how they scored on the IAT.[9]

Future implications

The history of racism, bias in healthcare, and tactics to address are evolving concepts that women's healthcare providers must address in the clinical and academic settings. In 2003, the Institute of Medicine published *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*.[10] Eighteen years later, we continue the journey to understand these disparities as well as how to educate our current and future WHNPs and other APRNs who provide women's and gender-related healthcare to mitigate bias in academic and clinical settings. Numerous studies cite evidence of implicit bias among healthcare professionals, including nurses, and this implicit bias impacts the level of care provided to patients and their families.[11,12] The IAT is one assessment tool available to help understand types of implicit bias. Although implicit bias is subconscious, the effect can be very explicit to those impacted. We must also recognize that not all bias is implicit and explicit bias continues to persist and affect those we serve. As we work to diversify our student demographics, hire more underrepresented clinicians and faculty in our clinical and academic settings, and provide support and infrastructure for their success, we will continue to make progress

in society and our profession. As researchers have noted, implicit bias decreases over time when students have positive interactions with Black faculty and staff.[5] We must be advocates for diversity in the hiring process. We must understand that while we have the IAT as a means for assessing implicit bias, we also have practical strategies such as addressing who we hire, promote, or allow to lead in our programs to influence our students' perceptions, which may have a greater impact long term than the one-time result of the IAT on race.

Other strategies to consider within women's health curriculum include examining content regarding race, racism, and cultural awareness. What type of pictures are portrayed in presentation content or videos shown? Consider the impressions that students may have. Because everyone has blind spots, it is important to get feedback from others on content. Assignments should be reviewed and examined for inclusive language. Reduce bias from exam questions by including more culturally appropriate content, such as "a 22-year old patient" versus "a 22-year old single, Black female," which may allow implicit biases to creep into student responses. As we work to understand and mitigate implicit bias in our academic settings, organizations must have a process for managing inappropriate behaviors with affiliated clinical practice partners where students are completing their clinical rotations. The journey to examining and addressing implicit bias may seem daunting but we must utilize resources that help support ongoing growth and development. Many campuses have or are developing diversity and inclusion departments, teams, or committees to help support this work. Faculty must be able to help

students understand structures that continue to support the existence of bias and empower them to be part of the solution to addressing systemic and institutional racism.[13] Clear and effective communication on these challenging topics is essential. The future depends on us. ■

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