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Implicit bias among health care providers and its influence on African Americans - A critical analysis

Khushboo PATEL[1]

Affiliations:

[1] M.A., Research Associate, Boston University, Boston, MA, USA.

Corresponding author:

Khushboo Patel, Ms., M.A. in Psychology, Department of Psychological and Brain Sciences, 64, Cummington St., Boston, MA-02215, USA. E-mail: kpatel96@bu.edu

Abstract

The present article reviews implicit bias among health care providers and its influence on African Americans in the United States and provides critical analysis of the Implicit Association Test (IAT), a commonly used measure to assess implicit bias. Empirical evidence confirms the widespread presence of implicit bias among health care providers in the United States. African Americans have typically reported a lack of communication, misdiagnoses, and inadequate treatment from their health care providers. It is also revealed that health care providers are likely to favor White patients over Black patients and view Black patients as less cooperative. All the studies discussed in the present article make use of the Implicit Association Test (IAT) in order to measure implicit bias. Due to some loopholes of the measure, the article aimed to provide future directions in order to overcome the limitations of the existing research on implicit bias by proposing alternate methodological considerations.

Riassunto

Questo articolo rivede il "bias implicito" tra gli operatori sanitari e la sua influenza sugli Afro-Americani degli Stati Uniti d'America e fornisce un'analisi critica del Test di Associazione Implicita (IAT), una misura comunemente usata per valutare il bias implicito. L'evidenza empirica conferma la presenza diffusa del bias implicito tra gli operatori sanitari negli Stati Uniti. Gli Afro-Americani hanno tipicamente riferito una mancanza dic omunicazione, diagnosi errate ed un'inadeguato trattamento ricevuto dai loro sanitari. E' stato anche evidenziato che i sanitari sono propensi a favorire i pazienti bianchi rispetto ai neri e vedono i neri come meno collaborativi. Tutti gli studi discussi nel presente articolo hanno usato lo IAT per misurare il bias implicito. A causa di alcune lacune dello strumento di misura, questo articolo ha cercato di fornire direzioni future per superare le limitazioni della ricerca esistente sul bias implicito proponendo considerazioni metodologiche alternative.

TAKE-HOME MESSAGE

Empirical research suggests prevalence of implicit bias among health care providers in the United States. This indicates a need for deliberation among healthcare professionals to take steps in order to mitigate this bias. The scientific community should work toward developing holistic and alternate methodologies to measure implicit bias to enhance understanding about this phenomenon.

INTRODUCTION

Background

Implicit bias refers to unconscious, automatic associations that impact our judgment, such that it leads to negative evaluation of a person or group of people based on characteristics like their group membership, gender, race, and sexual orientation [1]. In addition to our judgments, implicit bias can also be evident in the form of non-verbal cues through frequency of eye contact, physical proximity, etc. On the other hand, an explicit response is controllable, intended, made under conscious awareness, and requires cognitive resources [2]. On the whole, it may be a little harder to accept that memory processes have non-conscious components within it and at the same time difficult to accept that concepts like attitudes, goals, identity, and stereotypes may operate unconsciously. As a result, modern social psychology proposes that these constructs are actively extant and distinct from conscious experience [3].

Assessing explicit biases can be relatively easier as it includes self-report measures and all one needs to ask is, for example, *"Who would you prefer? A White patient or a Black patient?"*. It involves a deliberate consideration of a socially desirable response. Whereas, measuring implicit bias is more indirect in nature. There are different implicit attitude measures available, but the Implicit Association Test (IAT) is the most dominant method in order to measure implicit bias. The IAT is a test that aims to assess the speed with which individuals match concepts that are presented to them [4, 5]. The speed with which individuals match concepts is an indicator of how closely the concepts are associated with the individual's mental framework. To compute the results, the IAT determines the differences in reaction time as an indicator of mental associations. Hence, IAT participants, do not get to decide or deliberate about their feelings, they just categorize items as fast as possible [2]. In the words of Nosek (2007), "The rapidly accumulating literature of implicit influences on social perception, judgment, and action is a consequence of a surge in methodological innovations that manipulate concepts without participants' attention or recognition or that measure concepts without participants' awareness or control" [2, p.65]. The Implicit Association Test (IAT) is capable of measuring biases involved with regard to race, gender, ethnicity, nationality, and sexual orientation to name a few.

According to Pinkston (2015), "Black Americans are heavily stigmatized racial group in the United States" [6, p.189]. In the United States, specifically racial healthcare disparities are widely documented and implicit race bias is known to be one potential cause for it [1]. These biases are known to be transmitted by culture and learned by members of that culture, including health care professionals [7]. Although, there is presently a lack of understanding of the exact mechanism involved in the conversion of cultural immersion into implicit stereotypes and prejudices, its widespread presence certainly indicates the strong influence culture has [1]. Several studies reveal that racial biases impact how health care professionals diagnose and treat minority group patients. As a result it is important to develop novel approaches that aim to reduce the negative attitudes and beliefs by health care professionals when they provide health care services to individuals from traditionally stigmatized groups. According to a model proposed by Zestcott, Blair and Stone (2016), health care provider's implicit bias can take shape through two pathways [8]. In Path 'A', health care provider's implicit bias may alter their judgment and medical decisions regarding patients, especially those belonging to marginalized groups. Whereas in Path 'B', health care provider's implicit bias may affect their communication and interaction with stigmatized groups. Regardless of the path taken, the consequences would result into an impact on patient's perception, judgments, and trust with the provider. This would in-turn affect the patients' future engagement and adherence to treatment.

Sizeable research has been conducted on racial bias in the general population, however

relatively lesser studies have been conducted with regard to implicit racial bias specifically among health care professionals [9]. Aim of this paper is to examine various studies conducted to measure the level of implicit bias among health care professionals using the Implicit Association Test (IAT), and its influence on the African American population. This study will allow us to revise the methods used in order to measure implicit bias and inclusion criteria used, along with providing alternate methodological considerations.

DISCUSSION

FitzGerald and Hurst (2017) provided a systematic review by examining 42 peer-reviewed articles published between 2003 and 2013 worldwide [1]. Out of these, 15 studies used the Implicit Association Test (IAT) to measure biases among health care professionals in the United States. Health care professionals included physicians and medical doctors. The sample size across studies conducted on White health care professionals in the United States ranged from 40-524. There was no mention of a specific location within the United States. The recruitment method of the studies included extracting data from the Project Implicit Website, recruitment through emails, convenience sampling and invitations to physicians. Overall results from the race IAT revealed high level of implicit bias among physicians and medical doctors for African American patients. Black patients also rated their interaction with health care providers negatively. The IAT scores revealed high levels of pro-White implicit bias and treatment responses that specifically favored the White. When working under high time pressure, it led to less serious diagnoses for Black patients along with a lesser frequency of referring them to specialists, and low Socio-Economic Status (SES) Black patients were more likely to be judged and receive recommendations for intrauterine as compared to low SES White patients.

In a meta-analysis by Hall and colleagues (2015), 15 studies were examined [9]. Out of these, 14 studies used the race Implicit Asso-ciation Test (IAT). 11 of these studies were conducted in single cities like Atlanta, Baltimore, and Denver. Health care professionals included physicians, nurses, pharmacy students, specialists and pediatricians with 80% of them being identified as White. The sample size of the health care providers ranged from 14-2535. For six out of the 15 studies that also collected data from Black patients, the sample size ranged from 112-4794. Almost all the studies used cross-sectional designs and convenience sampling method. Meta-analysis revealed robust implicit bias scores for health care providers. Overall results indicated that health care professionals were more likely to associate Black Americans with negative words as compared to White Americans. In particular, health care providers associated Black Americans as being less cooperative, less compliant and less responsible in a medical context. As a result, Black patients received poorer treatment with regard to patient centeredness, contextual knowledge of patient and patient-provider communication. Physicians with anti-Black bias were seen to be more dominant in their communication techniques.

A study by Cooper and colleagues (2012) aimed to examine the association of clinician's implicit attitudes about race with visit communication and patient ratings of care [10]. A cross-sectional study was conducted on 40 primary care physicians and 269 patients residing in an urban community setting. The independent variable included two measures of the Implicit Association Test (IAT), whereas the dependent variable involved patient-clinicians communication recorded via audiotapes of medical visits. Patient perception of the clinicians were measured from post-visit surveys. The results indicated a correlation between clinicians implicit racial bias with markers of poor visit communication and poor ratings of care. Black patients constantly rated poor interaction with clinicians along with poor interpersonal care, verbal dominance, and lower positive affect. On the other hand, White patients were seen to be respected, involved in decisions and expe-

rienced greater patient-centeredness in their interactions with the clinicians.

Green and colleagues (2007) in their study measured explicit bias as well as implicit bias using the Implicit Association Test (IAT) on 287 physicians located in Atlanta and Baltimore [11]. The study specifically aimed to measure how implicit bias of physicians intervenes in their prediction for thrombolysis among patients. Results indicated that on the explicit measure, the physicians displayed an equal preference for Black and White patients. The physicians rated Black and White patients to be equally cooperative on a self-report measure used to assess explicit bias. On the other hand, all the three Implicit Association Tests, namely Race Preference IAT, Race Cooperativeness IAT and Race Medical IAT, used to measure implicit association had statistically significant effects of stronger association of negative attributes to Black patients as compared to White patients. Results also indicated that physicians were more likely to diagnose Black patients than White patients with Coronary Artery Disease as a cause of chest pain. Although there was no significant difference in recommending thrombolysis to Black versus White patients, it was seen that IAT signified a negative correlation between the Blacks and a likelihood of recommending thrombolysis to them. Whereas, it was positively correlated with White patients. Overall, the study was a representative account of using both implicit as well as explicit measures.

Study limitations and future directions

Although there has been a drastic improvement in the health of people living in the United States in the past 50 years, the level of disparities between the Blacks and Whites for several key indicators of health remain unchanged. Approximately 75% of all medical interactions for Black patients in the United States are reported to be 'racially discordant', that is, these interactions involve non-Black health care providers and these interactions are characterized by less patient trust, less positive affect and less of a joint decision making [12]. As noted above, majority of the studies present today, specifically make use of the Implicit Association Test (IAT) in order to measure implicit bias against African American patients by health care professionals. Hence, future research should look at certain common limitations posited with the use of the Implicit Association Test and adapt other methodological considerations. Most studies have data collected either in laboratory setting or data is retrieved from public domains which have made use of the IAT. Instead, the test should be conducted in a more naturalistic setting like the health care providers' work station, or a setting which may help control extraneous variables. Reliability of the data comes into question as the researcher is not always aware about the conditions in which the test was taken.

Not all existing studies utilizing the Implicit Association Test (IAT) mention the nature of instructions given to the participants. If the participants are explained the purpose and nature of the study, it might result into altering their responses. Any test being conducted in the future should use a standardized instruction pattern which may mention, 'you will be presented with certain faces and some words associated with it on the screen in front of you. Press the key to match the face and the word. Give the first natural response that comes to your mind. Mind well there are no right or wrong answers in this'. It may not be required to mention the word 'test', stating that the participants have to undergo a test, as mere usage of a word like that may also alter the results. There have been instances of inconsistent results wherein the same individual was seen to receive different results on two occasions when the Implicit Association Test (IAT) was taken [13]. The results were as divergent as having 'strong preference for White people' versus 'no preference at all'. The makers of the IAT themselves claim that having implicit preference does not necessarily mean you are prejudiced. On the other hand, according to Pinkston (2015), the IAT does not measure implicit prejudice, rather measures learned stereotypes [6]. On the whole, it

will not be wrong to say that what the IAT signifies, that is, a stronger preference for one, does not necessarily mean one has less preference for the other.

Future research should take into consideration an ideal sample of 100 or more, as current studies measuring implicit bias have a varied sample size ranging from being less than 15 to more than 4,500 and statistical power has always been a cause of concern. At the same time, there is no mention of a patient to physician ratio which can be taken into consideration while measuring implicit bias. The sampling technique used in most studies is convenience sampling or data has been extracted from online public domains. Instead, future studies should keep track of a specific health care provider and patients treated by that particular health care provider. Even with a continued use of the Implicit Association Test (IAT), coming up with a specific physician-patient ratio would give a true picture of implicit bias of a physician and first hand feedback of patients for the physician. In the current studies analyzed, the pool of physicians and patients drawn is random and unrelated and may not depict a true picture or may alter the specific aspects on which African Americans may be stereotyped against. Data collection should also involve the inclusion of demographic details like race of parents of African American patients, as it would help generate a better idea of implicit bias and prediction of genetic disorders. Another major limitation of the existing studies is the failure to capture effects of implicit bias due to gender. It will be vital to see if showing faces of Black men would have the same impact as showing faces of Black women. Furthermore, it would be interesting to draw a correlation of the gender of the face seen on the screen with the gender of the health care provider. At the same time, effects of showing faces of admired Blacks vis a vis admired Whites can also be an inclusion criteria that may be taken into consideration.

An ideal test would draw inspiration from a study by Dovidio and colleagues (2002), which was one of the unique studies which not only implemented the usage of an implicit measure in which participants were first presented with a priming stimuli and then asked to make a decision about a word that followed, but also involved recording non-verbal behavior [14]. Treatment judgments of physicians are not always measured explicitly in all studies, they are rather interpreted through results generated from the IAT. Hence patient review in studies which measure implicit bias among physicians should be included regardless. A blend of explicit measures, implicit measures like priming as well as usage of IAT along with video recording non-verbal behavior would make an ideal measure as limitations of one measure can be overcome by another measure. The Implicit Association Test (IAT) used should not only involve understanding racial aspects but a mechanism through which profit making mentality of health care physicians can also be traced. Location of the research study posits another cause of concern. Existing studies are majorly conducted in areas like the Midwest, Northeast and specifically Georgia in the Southeast. Future studies should be conducted in places like Washington D.C. and California which, according to the U.S. census bureau, has a representation of 49% Blacks and 8% Blacks respectively [15]. It will be interesting to note implicit bias of health care providers in one of the most populated and least populated states where African Americans reside. Difference in results may be expected due to difference in treatment of African Americans with regard to the location, political climate, level of education to name a few. Although, Georgia accounts for 34% of African American population of the United States, studies conducted there have shown an implicit bias among health care providers. This may be an indicator of bringing amendments to the already existing methodology used in measuring implicit bias. An interesting addition to future studies would be research conducted to measure implicit bias among healthcare providers and its influence on children. Prevalence of Attention Deficit Hyperactivity Disorder (ADHD) in African American male children is known to

be 5.65%, whereas that in White male children is 4.3% [16]. On the other hand, it was also noted that the rate of emergency department visits for minority children in the United States is three times higher as compared to non-minority children. Out of which, African American and Hispanic children are less likely to see a specialist than White children with asthma. There are currently only a handful of studies which include pediatricians and measure implicit bias against children. Hence, demarcation of studies with a focus on mental health versus physical health would also help generate clearer results.

CONCLUSION

In conclusion, there is empirical evidence suggesting presence of implicit bias among health care providers in the United States. This implicit bias leads to loss of faith in the health care system of the country with non-adherence of treatment by the African Americans. Although, studies proving the prevalence of implicit bias among health care providers makes use of the Implicit Association Test (IAT), there is dire need to reconsider the methodology used due to various limitations posited by IAT. Even with the continued use of IAT for future studies, inclusion of other explicit measures, patients reviews, and recording of non-verbal behavior is highly encouraged. Along with that, targeting a specific health care provider and assessing patient ratio would help generate unambiguous results. Maintaining an ideal sample size, increasing the geographical area in which studies are conducted as well as expanding research to include children is also highly recommended.

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