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Adapting the Implicit Association Test to Health Professions Education May Lead to Improving American Indian Health

Cover Page Footnote

I would like to thank the health professions faculty at the Oklahoma site institution for allowing classroom time for the pilot study. The dissertation study was dedicated to my grandson who will be learning about his Choctaw heritage, past and present injustices, and the work done by those of us who wish to make a difference.

The availability and quality of health care provided to American Indians falls short of the standard provided to Caucasian Americans (Agency for Healthcare Research and Quality, 2016; Institute of Medicine, 2003). Health disparities experienced by American Indians are a reflection of their lower health status as compared to other Americans and are contributed to by negative racial and ethnic biases in health care (U.S. Commission on Civil Rights, 2004). Aspects of health care provider-patient interactions which may guide important health care judgments and behaviors but are not revealed by self-report may be detected through implicit or unconscious biases of health care providers (Hall et al., 2015). Creating an awareness of implicit bias is the first step toward decreasing the effect of implicit bias on the judgments and health care behaviors future health care providers may perform with American Indians (Casad, Flores, & Didway, 2013; Rudman, 2004).

Concern for provider prejudices and stereotypes influencing the quality of care provided to minority populations has driven studies designed to identify biases against racial and ethnic minorities, causes of bias, and how biases may be minimized or prevented from influencing health care behaviors. Numerous studies have been conducted regarding implicit racial bias with many incorporating the Implicit Association Test (IAT) for Black/White racial bias since its introduction by Greenwald, McGhee, & Schwartz (1998).

The IAT has roots in the long history of word association tests and draws increased reliability and validity from the vast application of word association tests over more than a century. Carl Jung was particularly interested in using word association to provide empirical support for organization within the subconscious, and explored a postulated relationship between response time and engagement of the unconscious mind (Jung, 1904/1973). The philosophical basis underlying word association tests supported studies of the connection between mind and matter, and between sensory perception and comprehension, with a resurgence in interest in the 60s, and provided a foundation for development of the IAT (Deese, 1966; Frey-Rohn, 1974; Gescheider, 1976).

The value of the IAT in racial bias research is heightened through its use in assessment of implicit attitudes and beliefs which may not match those explicitly expressed due to participants' inability or unwillingness to consciously access personal attitudes and beliefs (Greenwald et al., 1998). Jung (1962/1989) recognized the need for an alternate means of gaining insight into the values held by the Pueblo Indians he sought to more fully appreciate when "direct questioning led to nothing" (p. 250). Decades after Jung's word association studies there remains a lack of published research on implicit bias against American Indians; the Project Implicit (2011) IAT incorporating black and white historic images of American Indians and European Americans limits application to contemporary American Indians and Caucasians affected by biases today (Project Implicit, 2011).

Studies have been conducted with medical students and physicians using a form of the IAT to evaluate implicit bias against African Americans in favor of Caucasians, however, published IAT studies are lacking regarding implicit bias against American Indians by health care professionals or students (Blair et al., 2013; Haider et al., 2011).

Creation of an IAT for measurement of implicit bias against American Indians may be instrumental in minimizing the effects of implicit racial bias against American Indians. In 2017, the authors of this article tested a paper-format IAT in a pilot study designed to identify the presence and extent of implicit attitudes of health professions college students against American Indians. The pilot study received IRB approval by the Oklahoma university site of the study as well as by AT Still University, the institution through which the study was conducted. American Indian faculty at the study site institution were consulted to review terms used in the study IAT, provide classroom access to students participating in the pilot study, and to review the manuscript. The study titled *Outcomes of Adaptation of an Implicit Association Test for Measuring Implicit Bias Against American Indians in a Health Professions Education Setting* was published in ProQuest Dissertations.

Demonstration of predictable implicit response patterns that varied from explicit responses provided evidence for the value of adaptation of an IAT to evaluate American Indian bias. The study results were expected to provide a

criterion which can easily be used in a classroom setting to measure implicit bias against American Indians. Results from this study could influence policy within health professions education and by directors at individual health professions programs with program decisions based on broad generalizations of decreased bias.

Identifying implicit bias in sample populations of health professions students will provide the impetus for development of curriculum materials intended to minimize the effects of bias on the quality of health care provided by health professions graduates to American Indians. A demonstration of less bias by those participants who have had interactions with American Indians prior to the study would suggest that more opportunities for interaction be offered during health professions programs to ameliorate biases among participants with minimal prior American Indian contact. Addition of the IAT as a measure of implicit bias to existing explicit survey methods will allow for comparisons in American Indian bias studies and result in increases in the value of both data types.

Providing a method for measuring implicit bias of health professions college students against American Indians is a necessary precursor to developing and implementing methods for minimizing the effects of implicit bias in the training phases of health and health care professions. If using the IAT to produce racial bias awareness, instructors should then also be charged with identifying ways to introduce skills and strategies for limiting the influence of bias on health care activities (Burgess, van Ryn, Doridio, & Saha, 2007). Situations that expose people

to groups outside of their own social group including opportunities for positive emotional engagement can decrease implicit biases (Rudman, Ashmore, & Gary, 2001). Forming personal connections with individuals has been demonstrated to lead to rapid, dramatic changes in implicit attitudes (Olsson, Ebert, Banaji, & Phelps, 2005). Consideration of the impact of health professions curriculum on students' implicit biases is vital to the promotion of behaviors consistent with unbiased clinical decision-making (Archambault, Van Rhee, Marion, & Crandall, 2008). Using the IAT to bring health professions students' implicit biases to conscious awareness may provide them with the realization and motivation to compensate for biases in ways that may decrease effects on clinical decision-making (Archambault et al., 2008). Use of the IAT for assessment of implicit attitudes of a sample population in regard to experiences with American Indians is instrumental to comparisons of explicit racial bias with implicit racial bias and will increase the richness of American Indian bias research data collected. A paper-format American Indian-Caucasian IAT will provide an easy to use classroom tool for demonstrating the concept of implicit bias and will be particularly valuable when used with students preparing for careers providing health care services to American Indians.

Using the IAT for other applications should only be done with the knowledge that it is a single indicator of unconscious bias. Individuals can make a choice to be aware of their personal biases and give careful consideration to assure

associated actions taken are performed without prejudice. Whether hiring health care professionals or others, use of the IAT as a job applicant screening tool remains controversial and could face legal scrutiny as it may exclude ethically practicing individuals of varied racial and ethnic backgrounds from positions for which they are well qualified (Legault, 2019; Singal, 2019). The IAT has well supported value when used as an educational tool providing self-awareness for introspection (Sukhera, Wodzinski, Rehman, & Gonzales, 2019).

Intercepting health providers while they are health professions students sets the stage for breaking the link between implicit biases against American Indians and discriminatory health care behaviors (Haider et al., 2011). The American Indian-Caucasian racial bias IAT may become valuable as a tool for introducing student groups to implicit bias through a classroom exercise. Inclusion of positive intergroup interactions with American Indians in which personal connections are made can reduce implicit bias against American Indians (Betancourt & Green, 2010; Dovidio & Fiske, 2012; Drwecki, Moore, Ward, & Prkachin, 2011; Olsson et al., 2005; Penner et al., 2010; Rudman et al., 2001). Activities that promote intergroup mutual trust may counter cultural biases to which students are exposed (Greenwald & Pettigrew, 2014; Livingston, 2002; Teachman & Brownell, 2001). Including case studies with American Indian patients in program curricula may expose students to cultural considerations leading to decreased bias in future clinical scenarios with American Indian patients. Intergroup efforts must also be

made at a societal cultural level with promotion of inclusivity for all racial and ethnic groups (Dixon, Levine, Reicher, & Durrheim, 2012; Rudman, 2004).

While reasons for differences in health care behaviors of health care providers may include lack of cultural competency, provider bias is a targeted focus for affecting future changes in inequitable health care (Blair, Steiner, & Havranek, 2011; Burgess, Fu, & van Ryn, 2004; Green et al., 2007; Oliver, Wells, Joy-Gaba, Hawkins, & Nosek, 2014). Studies exploring the link between bias and health disparities have found racial biases of health care providers play a role leading to health disparities due to unequal treatment of minority populations (Oliver et al., 2014). Identification of implicit racial biases among health care providers and the relationship to quality of care delivered to minority populations including American Indians could provide the impetus for development and incorporation of methods in clinical training that may decrease such biases (Sabin, Rivara, & Greenwald, 2008). Beyond recognizing and decreasing biases, American Indian implicit bias research with health care professionals and students using the IAT may provide a valuable means for reaching the ultimate goal of improving health care for American Indians and thereby improving the health of American Indian tribal communities.

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