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Abstract

Implicit bias has gathered research interest in healthcare, yet remains less directly examined in the mental health field (Merino et al., 2018). Mental health providers can continue to be influenced by implicit bias despite higher ratings of cultural competence (Boysen, 2010). The purpose of this study was to supplement the limited research examining the impact of implicit bias on the clinical judgment process. The study aimed to examine whether: 1) implicit race bias scores were related to diagnostic impressions, 2) feedback about implicit bias was related to diagnostic impressions, and 3) racial affect mediated the relationship between receiving feedback and diagnostic impressions. Participants (N = 74) completed a survey-software Race IAT (Carpenter et al., 2019; Greenwald et al., 1998) and received manufactured neutral, positive, or negative feedback about their scores. They then watched a video of a Black female client describing both anxiety and depressive symptoms and rated the degree to which they agreed with depressive and anxiety disorders and the perceived severity of the disorders. The results found partial support for the first and third hypotheses, while no support was found for the effect of feedback on clinical impression. Participants who obtained higher D-scores, indicating more bias towards Black individuals, also agreed more strongly with Generalized Anxiety Disorder for the hypothetical Black client regardless of feedback condition. Participants who received negative feedback, i.e. bias towards Black individuals, endorsed higher racial affect compared to the positive feedback and control groups. Finally, racial affect mediated the relationship between the type of feedback and perceived severity of Generalized Anxiety Disorder. Implications, limitations, and suggestions for future research are discussed.

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“But I’m Not Racist”: How Implicit Racial Bias, Feedback and Racial Affective States

Impact Clinical Judgment in Mental Health Treatment

A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Dhriti Tiwari

August 2021

Advisor: Dr. Pat Garriott

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groups. Finally, racial affect mediated the relationship between the type of feedback and perceived severity of Generalized Anxiety Disorder. Implications, limitations, and suggestions for future research are discussed.

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CHAPTER 1: INTRODUCTION

AJ has been feeling low lately, is struggling to focus at work, and feels isolated and irritable. AJ decides to see a therapist. Her friend recommended a therapist who was described as very effective, friendly, and considerate. AJ attempts to set up an appointment but does not have success for weeks due to the therapist's availability. When AJ finally meets with her therapist, she is feeling frustrated, confused, and anxious to get help. However, her therapist appears brief and frustrated with her, and suggests she try medication. She does not feel understood by the therapist. Since her friend had such a different experience, AJ wonders if she is "not fit" for therapy and decides to not return for subsequent sessions.

This vignette presents a case that may be fairly common in the experience of mental health professionals, where the client-patient "fit" may not be effective or beneficial. However, when taking into consideration specific factors that might contribute to such a discrepancy, a different picture may be drawn. In this vignette, if AJ is a woman of color, and her friend and the therapist are white, then race is likely to be more important in determining fit. AJ's example demonstrates numerous cases where clients of color experiencing mental health distress do not return for therapy.

These differences can be explained through multiple perspectives, including therapist-specific factors (Owen, Imel, Adelson & Rodolfa, 2012; Hayes, Owen, & Bieschke, 2015), such as cultural orientation, therapeutic approach or style, personality,

or systemic factors like the type of setting and barriers to access (e.g. sessions limits, insurance or managed care). Racial disparities in clinical outcomes (Abreu, 1999; Hayes et al., 2016) make it critical to examine the influence of race and racial attitudes held by providers. Further, when unexpected termination (as described above) or ruptures occur, it is important to consider the process on both ends of the therapeutic dyad, including client perceptions of their therapists' and therapists' attitudes and impressions as they relate to the therapeutic process and outcomes (Owen et al., 2010).

Studies have examined the impact of microaggressions and therapist racial attitudes on client outcomes (Owen, Tao, Imel, Wampold & Rodolfa, 2015; Constantine, Juby & Liang, 2001; Constantine, 2007; Johnson & Jackson 2014), but there is limited research on understanding therapists' implicit or hidden biases (Katz & Hoyt, 2014; Boysen, 2010). These are biases that may exist despite conscious assertions or reports of being unbiased (Devine, 1989; Boysen, 2010). While mental health providers generally report low levels of overt racial bias, they continue to hold implicit biases that often go unaddressed (Boysen & Vogel, 2008) and may impact the therapeutic process and outcomes.

Over the last several years, provider implicit bias has garnered researcher interest in healthcare and educational settings (Smedley et al., 2003; van Ryn et al., 2002; Blair, Steiner & Havranek, 2011) due to disparities in outcomes for clients of color. There is also some research on implicit bias in mental health settings, yet most of these studies rely on self-report measures with the exception of Katz & Hoyt (2014). Self-report measures of bias or racial prejudice are largely unreliable due to social desirability effects

(Boysen, 2010), and have generally low to no correlations with behavioral measures of prejudice (Wittenbrink, Judd & park, 1997; Greenwald et al., 1998).

When accessing mental health treatment, racial-ethnic minority (REM) patients or clients may experience some apprehension or uncertainty about their therapist and their ability to provide culturally competent care. Accordingly, client perceptions of therapist's multicultural competence have been shown to account for some variance in treatment outcomes (Tao, Owen, Pace & Imel, 2015). This becomes a more significant concern when taking into account the broader issues of racial injustice and discrimination faced by minoritized individuals. Black individuals, in particular, have historically experienced repeated systemic challenges and discrimination, which can affect both their mental health and access to mental health treatment. A meta-analytic review of 66 studies found that perceived racism was significantly associated with more adverse psychological and physiological outcomes for Black American adults (Pieterse, Todd, Neville & Carter, 2012).

Implicit Bias

Implicit bias is bias that exists despite conscious and overt efforts to be equitable or unbiased (Merino, Adams & Hall, 2018; Boysen, 2009). Despite self-reports of low overt bias towards a particular minoritized group, mental health professionals may continue to hold high levels of implicit bias, which can have an impact on therapeutic outcomes (Boysen & Vogel, 2008). There is extensive literature that examines the impact of overt or explicit bias towards a particular minoritized identity, however, there is limited research on implicit bias in mental health practice (Boysen, 2008).

Implicit racial bias has varying levels of impact on both individual and group outcomes (Devine, Forscher, Austin & Cox, 2012). These include outcomes on the micro level that affect the types of interactions with others, as well as those on macro levels which consist of influences on broader opportunities such as employment, education, and legal support (Devine et al., 2012). Furthermore, these inequities and biases reflect broader discriminatory attitudes and beliefs that can continue to be perpetuated within therapy, and can take the form of microaggressions and over-pathologizing (Devine et al., 2012; Merino et al., 2019).

Implicit Bias in Mental Health Treatment

Previous literature has linked experiences of microaggressions in various parts of the counseling process to themes of invalidation, stereotypic assumptions, reluctance to provide feedback, and culturally insensitive treatment recommendations (Constantine, 2007; Hernández, Carranza & Almeida, 2010). Further, when examining the client-therapist relationship, some literature suggests that microaggressions directed towards either the client or the therapist were linked with perceptions of a weaker therapeutic alliance (Hernández et al., 2010).

On the other hand, microaggressions directed towards clients can be more problematic in their potential for negatively impacting client treatment and wellbeing (Hernández et al., 2010). Merino et al. (2018) found that implicit racial bias of mental health practitioners impacts rapport with clients. This can be due to the occurrence of microaggressions weakening the therapeutic alliance, effective assessment, treatment of mental health concerns and response to crises (Merino et al., 2018). Further, racially minoritized groups continue to face barriers to accessing effective mental health care and

can be susceptible to lower therapeutic outcomes despite reporting high levels of therapeutic alliance if therapy is accessed (Merino et al., 2018). Thus, it is essential to examine the ways in which mental health providers are understanding and responding to their own implicit bias to ensure equitable mental health outcomes.

Implicit Bias and Training

While academic and clinical training programs focus on standards of multicultural competence (MCC) to address prejudice, biases, and attitudes (Pieterse et al., 2008), there has been limited focus on education and training on implicit racial bias in mental health programs (Boysen & Vogel, 2008). However, given that implicit bias can continue to impact clients even after self-reports of high multicultural comfort and competence (Boysen & Vogel, 2008), it is necessary to examine how implicit bias may affect mental health practitioners and trainees. Boysen (2010) found that studies on implicit bias were notably lacking in the counseling literature, and although several training programs emphasize multicultural competency, implicit bias has not been addressed as frequently.

Multicultural competence (Sue et al. 2008) has historically focused on providing culturally informed care to REM clients. Furthermore, the racial identity of providers can have an impact on their levels of MCC and their colorblind attitudes (Chao, 2013). Specifically, providers who are earlier in their training tend to differ in MCC based on their racial identity, with REM providers demonstrating higher levels of MCC (Chao, 2013). This demonstrates that there may be a need to examine implicit biases in providers as they can impact colorblind attitudes and level of MCCs.

Feedback and Awareness of Bias in Supervision

Because implicit biases can exist outside of conscious awareness, a potential way to address them is by increasing conscious awareness about them. Increasing awareness of biases can help mental health providers offer more effective, culturally informed care (Bermudez, 1997). Such awareness can occur through self-examination, training programs, didactic seminars, or individual or peer feedback in supervision. However, providing feedback about cultural competence and potential biases is often difficult for supervisors either due to concerns about feedback being hurtful, or concerns about imposing specific values towards trainees (Hoffman, Hill, Holmes & Freitas, 2005; Burkard, Knox, Clarke, Phelps & Inman, 2014).

Providers who demonstrate openness to learning about cultural issues, and commitment to self-examination likely embody cultural humility (Hook et al., 2013). Cultural humility is a component of therapists' multicultural orientation (MCO; Owen, 2013) and is defined as an other-oriented approach characterized by openness, curiosity, lack of arrogance, and a genuine desire to understand the client's identity (Owen et al. 2016). According to the MCO framework, self-report bias limits the utility of multicultural competence scales, and it may be more beneficial to examine cultural competence with multicultural orientation (Owen et al., 2016). This framework can therefore help explain the mismatch in self-reported cultural competency and implicit racial attitudes and bias.

Some evidence suggests that higher level of providers' cultural humility is correlated with reduced depressive symptoms in clients of color, particularly those in their mid-late thirties and younger, and clients who struggled with issues related to racial

identity (Franco & McElroy-Heltzel, 2019). A study found that among social worker educators, cultural humility and self-examination were related to reduced unintentional microaggressions towards students with mental illness (Charles, Holley & Kondrat, 2017). A higher degree of cultural humility may therefore be linked with more openness to self-examination related to bias.

Racial Affect for White providers

Prior literature has found that when confronted with evidence of discrimination or racism, individuals are likely to respond affectively (Spanierman, Beard & Todd, 2012; Grzanka, Frantell, Fassinger, 2019). Further, such affective responses are critical in the formation of attitudes and behaviors (Hogan and Mallott 2005; Todd et al. 2010; Trainor, 2005; Spanierman, Beard & Todd, 2012; Kent, Lindquist & Payne, 2018; Grzanka, Frantell & Fassinger, 2019). Depending on the specific intersection of identities of the individual, the affective response can be varied; such as having a fear of losing privilege in White college men versus more sadness and empathetic responses in younger White women (Spanierman, Beard & Todd, 2012). The researchers categorize racial affect into the following types: oblivious, empathetic but unaccountable, antiracist, fearful guilt, insensitive and afraid (Spanierman, Beard & Todd, 2012). These different categories can have varying effects on the specific attitudes held towards policy such as Affirmative Action; e.g. those who fall in the antiracist or empathetic but unaccountable categories are more likely to be supportive of affirmative action. This suggests that affective reactions to racism are essential in shaping the attitudes and behaviors towards racial issues and can shape broader socio-political issues. Such attitudes, therefore, can be explained by the specific type of racial affect experienced.

Further, there is a need to distinguish between when affective responses shape attitudes and behaviors, and when they can prevent action through defensiveness and disengagement (Grzanka, Frantell & Fassinger, 2019). This distinction can potentially be explained through identifying white guilt, which is often targeted at attitudes, behaviors, or actions versus white shame, which becomes targeted towards the full self (Grzanka, Frantell & Fassinger, 2019). In a 2019 study, white guilt was found to be associated with lower levels of racism, more engagement with anti-racist advocacy, whereas white shame was less likely to predict anti-racist attitudes (Grzanka, Frantell & Fassinger, 2019).

Racial Affect for People of Color

Most of the literature on racial affect has focused on white individuals' responses to racism and race-related themes. However, some evidence suggests that there are emotional and affective responses for People of Color (POC) when presented with issues of race and racism (Stein et al., 2016). Research on emotional reactivity and positive ethnic-racial affect suggests that emotional responses to racism have a significant impact on POC development (Rivas-Drake et al., 2014). For example, Stein et al. (2016) found that POC adolescents who demonstrated more positive racial affect were less likely to be negatively impacted by instances of discrimination over time.

Although there is a larger focus in the literature on POC's emotional response when they are targets of racism or discrimination (e.g. Lewis et al., 2016), there is also some evidence that highlights that POC are likely to experience emotional responses to witnessing racism (Sheng et al., 2013). Empathetic identification (Sheng et al., 2013) and internalized racism (Speight, 2007; Choi, Israel & Maeda, 2017) have both contributed to various affective responses for being presented with racist themes.

There are some similarities between white individuals and POC in this area. Like white individuals, POC are likely to exhibit implicit bias towards other POC in the form of microaggression and colorblind attitudes (Neville et al., 2013). Further, defensiveness in response to implicit bias tests exists for both white and POC participants (Howell, Redford, Pogge & Ratliff, 2017). Additionally, affect can impact the relationship between race-related issues and group membership for both White and POC (Miles et al., 2015).

However, qualitative research suggests that there is a need to understand emotional and affective responses for POC from a cultural constructionist view, particularly when comparing the experience of guilt and shame, e.g. for white individuals versus Asian Americans (Liem, 1997). That is, guilt and shame-related emotions may exist for both groups, but the significance of these emotions will vary considerably based on cultural context (Liem, 1997). Given that limited research has examined POC racial affect specifically in response to feedback to implicit bias, there is a need to more fully understand this relationship.

Clinical Judgment

Clinical judgment encapsulates clinicians' ability to describe pathology and personality, to provide diagnosis, case formulation, and behavior prediction (Garb, 2005). For this study, clinical judgment in the context of diagnostic impressions was examined. Clinical judgment has been studied through various theoretical lenses, including cognitive and social factors (Abreu, 1999; Garb, 2005; Garb, 2013). Clinicians are likely to make clinical judgments through three primary cognitive structures: a) the primacy effect, which occurs when clinicians make "snap" or automatic judgments; b) cognitive heuristics such as the affect heuristic where clinicians rely on their feelings or affective

states for their decision-making rather than relying solely on the information presented and c) confirmatory hypothesis testing, where clinicians selectively seek and remember information that confirms what they already believe (Garb, 2013). A recent study found that emotion plays an important role in clinical judgment, particularly in the absence of clear and defined theoretical frameworks for practice (Kozlowski et al, 2017).

Social factors that influence clinical judgment include the client's race, which has been shown through empirical studies to be more significant than age or gender in clinical judgment (Abreu, 1997; Garb, 2013). Specifically, Black clients are more likely to receive larger dosages and number of prescriptions for psychotropic and antipsychotic medication than other racial groups, even when controlling for psychological functioning, presence of a disorder, and severity of the presenting issue (Garb, 2013). However, when clinicians spend more time in making clinical assessments with Black clients, this discrepancy is reduced (Garb, 2013). Thus, clinical judgment is likely to be immediate and automatic, and when combined with the automatic nature of implicit racial bias, it can lead to negatively biased clinical decision-making. This is especially pertinent in brief treatment settings that often require quick decision-making.

The Present Study

The present study examines the relationship between measured levels of implicit bias, feedback about implicit bias, and clinical judgment in mental health providers.

There is some empirical evidence that suggests a correlation between affective regulation, learning capacity, and implicit bias (Livingston & Grwecki, 2007 & Cheon, Livingston, Chiao & Hong, 2015). However, no literature exists that has directly examined affective states with observed implicit bias measures in mental health settings. This study aims to

bridge this gap in the literature by exploring the affective states after becoming aware of implicit biases.

Specifically, the study aims to examine whether mental health providers' measured implicit bias or receiving manufactured feedback about implicit bias can impact their clinical judgment in a hypothetical clinical vignette. Subsequently, the study examines how racial affect after receiving manufactured feedback can affect the given DSM 5 diagnosis and perceived severity of client concerns.

Research Questions and Hypotheses

1. Are implicit bias scores for race associated with mental health providers' diagnostic impressions?
 - a. Hypothesis 1: Higher implicit bias scores for race will be significantly positively correlated with higher ratings of distress and more severe diagnostic impressions.
2. Will diagnostic impressions of a Black woman differ based on feedback about implicit biases given to providers?
 - a. Hypothesis 2: Providers who receive manufactured feedback about their levels of pro-White implicit bias will provide lower ratings of distress, and less severe diagnoses compared to those who receive manufactured feedback about their levels of pro-Black implicit bias or no bias feedback.
3. Can the relation between receiving feedback about implicit bias on clinical judgment be explained by racial affect?

- a. Hypothesis 3: Racial affect scores will mediate the associations between receiving implicit bias feedback and mental health providers' ratings of distress and diagnostic severity.

CHAPTER 2: LITERATURE REVIEW

Implicit Bias

Cousins (2014) describes implicit bias as an “unconscious preference”, that may or may not reflect conscious cognitive and mental processes. Within social issues, implicit bias is described as “deep-seated preferences” against members of a specific group or identity (Cousins, 2014). This distinction between explicit and implicit bias is exemplified by the generation of baby boomers who were involved in the civil rights movements in the 1960s while having been exposed to multiple overt messages of bias since a young age when racial prejudice and discrimination were more prevalent (Cousins, 2014). According to the authors, baby boomers consciously took action and made efforts to promote equality of race and gender (Cousins, 2014). However, having been exposed to negative socio-environmental messages made them susceptible to unconscious cognitive associations that can lead to biases against racial and gender minorities (Cousins, 2014).

Conscious thought and efforts are not negated through the existence of implicit bias. Cousins (2014) states that it is possible for an individual to consciously reject stereotypes and biases while having a degree of implicit or unknown level of bias. Implicit bias is associated with specific, observable, and quantifiable behaviors such as “eye contact, differences in how verbalizations are directed, and proxemics” (Cousins, 2014)

The Implicit Association Test and Project Implicit

Greenwald, McGhee, and Schwartz (1998) developed the Implicit Association Test (IAT) to provide a standardized measure for assessing implicit attitudes. The measure relies on principles of cognitive priming and rests on the premise that implicit associations underly automatic evaluations that occur when activated quickly or automatically (Greenwald et al., 1998). The task uses two distinct categories for target-concept discrimination and attributes dimension of evaluation (Greenwald et al., 1998). That is, the task requires a distinction between the presented targets or images of Black and White faces and categorizing them on the left and right sides of the screen (Greenwald et al., 1998). Next, the task elicits automatic evaluation by measuring quickness for pairing each of the targets with positive and negative attributes (Greenwald, 1998).

The IAT has since been used in countless studies to measure implicit bias in various domains, including race, gender, sexuality, and religion. Unlike self-report measures, the IAT is designed to provide data that can offset the social desirability effect because of the speed of the categorization task (Greenwald et al. 1998). In 1998, Greenwald, Banaji, and Nosek created Project Implicit, a non-profit organization aimed at education about implicit or automatic biases as well as creating a virtual laboratory that provides access to large-scale data collection.

History of Implicit Bias Research

Literature on implicit bias extends back to the early 1980s (Devine, 1989) building on social psychological examination of stereotyping in the 1950s (Allport, 1954) and cognitive psychological examination of categorization (Billig, 1985). This suggested

that prejudice was an “inevitable consequence of ordinary categorization processes”, and that stereotyping will automatically occur as part of these categorization processes towards targets of the stereotyped group (Billig, 1985; Devine, 1989).

However, to challenge the argument of the inevitability of prejudice, Devine wanted to explore the distinction between mere knowledge or presence of prejudice, and personal beliefs and argued that each of these represented unique and separate processes that comprise the understanding of attitudes towards a particular group (Devine, 1989). She elaborated that based on existing literature on learning, children are likely to first develop stereotypes before they have the cognitive ability to develop personal beliefs through questioning or evaluating the stereotype, which makes the latter a newer cognitive process (Devine, 1989). As a result, stereotypes have a longer time to be activated and automatically reinforced, making them easier to access than personal beliefs (Devine, 1989).

In the context of this model, Devine (1989) distinguishes high-prejudice individuals and low-prejudice individuals through how much overlap they have between their automatic stereotypes and personal beliefs. That is, high-prejudice individuals are likely to internalize stereotypes and have greater overlap between those cultural stereotypes and their own beliefs while low-prejudice individuals consciously decide that the stereotype is inappropriate and have a greater disparity between their automatic stereotypes and personal beliefs (Devine, 1989). In order to act or respond without prejudice, this model suggests that individuals must consciously inhibit the automatically activated stereotype (Devine, 1989).

In her own studies, Devine (1989) found that both high- and low-prejudiced individuals did not differ in their knowledge of cultural stereotypes towards Blacks and that both groups had cognitive structures that can produce prejudiced responses if not consciously monitored. However, high- and low-prejudiced individuals differed in the content of thoughts they reported towards Black individuals such that high-prejudiced individuals were more consistent with stereotypes and were more likely to ascribe traits to the entire racial groups than low-prejudiced group (Devine, 1989). This indicated that low-prejudiced individuals engaged in more inhibition of automatic stereotypes to intentionally replace them with nonprejudiced responses, similar to cognitive processes involved with breaking a habit (Devine, 1989).

Genetic Causes

As stated above, Cousins (2014) emphasizes the environmental and systemic causes of implicit bias, the exposure to biased messages from an early age. However, there is some evidence of a genetic or biological predisposition towards implicit racial bias. According to a recent study, a particular gene, the serotonin transporter polymorphism (5-HTTLPR) may be linked with implicit racial bias (Cheon, Livingston, Chiao & Hong, 2015). This study also highlights that the same gene (5-HTTLPR), is linked with affective responses and regulation, and a particular variant of the gene is linked with implicit but not explicit racial bias (Cheon et al., 2015). Furthermore, the authors reiterate that such an influence of the genes is not readily expressed through self-report (Cheon et al., 2015). Thus, there appears to be a genetic, potentially neurological connection between the affective regulation and levels of implicit bias of an individual.

Implicit Bias and Microaggressions

Sue and colleagues (2007) assert that the nature of racism has shifted in North America and that it is more likely to be covert and has evolved from more blatant and overt “old-fashioned” forms of racism. They further state that while there are several efforts to address this contemporary form of racism, there is difficulty in describing or defining such forms of racism through implicit bias (Sue et al., 2007). To address the need for understanding this type of discrimination, the authors describe microaggressions, which allow for more specific and observable behaviors that convey implicit bias (Sue et al., 2007). They emphasize that in order to provide effective and culturally sensitive treatment, providers must engage in: “(a) awareness of oneself as a racial/cultural being and of the biases, stereotypes, and assumptions that influence worldviews and (b) awareness of the worldviews of culturally diverse clients (Sue et al., 2007, p. 271).”

The term “microaggression” was first coined by Pierce (1970) to describe the “subtle, stunning, often automatic, and non-verbal exchanges which are ‘put-downs’”. The authors further elaborate that such “subtle insults” are often directed at marginalized groups automatically or unconsciously and send denigrating messages. Such insults can take the form of verbal comments, tone, gestures, or looks and are so pervasive that they are often dismissed as “innocent” or “innocuous” (Sue et al., 2007). Racial microaggressions encapsulate such verbal, behavioral, or environmental slights that can be intentional or unintentional, yet still convey negative, derogatory, and alienating messages to the subject or target (Sue et al., 2007).

Sue et al. (2007) further categorize microaggressions into the following types: microassaults, microinsults, and microinvalidations. Microassaults are explicit verbal or

nonverbal attacks that are intended to hurt or alienate the target and are often conscious and deliberate actions (Sue et al., 2007). Microinsults are communications that convey insensitivity and demean a particular identity and are often unknown to the perpetrator (Sue et al., 2007). The authors provide the following example of a microinsult: asking a person of color “How did you get that job?” which conveys the message that persons of color are not qualified or that their achievement was obtained through affirmative action and not ability (Sue et al., 2007). They elaborate that such statements are not aggressive in isolation, but rather through the context in which they occur (Sue et al., 2007). The third category, microinvalidation, is defined as a communication that excludes, nullifies, or negates the experienced reality, thoughts, or feelings of a person of color (Sue et al., 2007).

Black individuals specifically have been targets of microaggressions more frequently than other identities (Mercer, Zeigler-Hill, Wallace & Hayes, 2011; Sue et al., 2007). Given the long history of oppression and discrimination faced by the Black community and the changing ways in which racism manifests in the United States (Sue et al., 2007), recent literature is moving from the overt towards the more subtle forms of discrimination (Mercer, Zeigler-Hill, Wallace & Hayes, 2011). Furthermore, Black women in particular face the unique impact of such discrimination due to the intersectionality of oppression based on race and gender which leads to further psychological distress (Lewis & Neville, 2015; Lewis, Mendenhall, Harwood & Browne, 2016).

Implicit Bias in Healthcare

There is increased research interest in implicit bias in healthcare and medical settings, particularly as a result of racial disparities in health outcomes. Specifically, persons of color show higher rates of prevalence and complications from hypertension, heart disease, and diabetes, and experience poorer healthcare outcomes (Maina, Belton, Ginzberg, Singh & Johnson, 2017). They are more likely to receive a diagnosis at advanced stages of several cancer types, as well as higher mortality and incidence rates (Maina et al., 2017).

A systematic review of the literature found that provider racial bias has been linked with disparities in health outcomes (Nelson et al., 2003). The review further found overwhelming evidence that most healthcare providers (HCPs) across disciplines and training levels show implicit bias towards patients of color, including Black, Hispanic, Latinx, American-Indian, and darker-skinned individuals, and that Black providers were most likely to have no implicit bias towards other races compared to White providers (Maina et al., 2017). The authors also found that there is limited research on how implicit bias impacts patient care and outcomes, although more studies are emerging in this area (Maina et al., 2017). This was in contrast with some literature that found that despite having significant levels of implicit bias, there is no impact on clinical outcomes or treatment recommendations (Ogungbe, Mitra, & Roberts, 2019).

These findings were further supported by a review by FitzGerald and Hurst (2017) that shed light on the complex processes involved in measuring and understanding implicit bias in medical providers. FitzGerald and Hurst (2017) state that the patient-clinician interaction plays an important role in how implicit bias affected treatment and

patient outcomes, and that providers generally showed the same levels of implicit bias as the general population. Furthermore, they added that the most useful research in this area combines the use of the IAT with measures that directly examine patient characteristics and outcomes, which revealed that implicit bias is highly correlated with diagnosis and treatment decisions of minoritized identity patients (FitzGerald & Hurst, 2017). One study that used IATs found that healthcare providers demonstrated significant implicit bias towards Black individuals, seeing them as less cooperative and less likely to adhere to treatment, even when they reported as having no bias on self-rated measures (Green et al., 2007). Further, another study found that both Black and White providers perceived Black patients as feeling less pain compared to white patients, and that status moderated this relationship (Trawalter et al., 2012).

Measurement issues

As mentioned before, the measurement of implicit attitudes can present a challenge due to social desirability or individuals wanting to protect their image or self-perception. In self-report measures or measures that are highly face-valid, it can be difficult to discern between explicit and implicit attitudes, since the process of evaluation itself makes the participant explicitly aware of these attitudes. There has been debate among researchers about the predictive validity of the race IAT and a call for further exploring the theoretical frameworks related to IATs (Oswald et al., 2013). However, the IAT remains the most effective tool for measuring implicit bias due to its design (Greenwald et al., 2009; Boysen, 2010; Nosek, & Hanson, 2006).

Nosek & Hanson (2008) found that personalizing of the Implicit Association Test is correlated with less automatic categorizing and more explicit judgment. They further

found personalized IATs to generally have lower reliability ratings than original IATs developed by Greenwald et al. (1998). This makes it challenging to reliably measure implicit bias with multiple identities, or identities not included in Project Implicit's main IAT sets.

Furthermore, a review of meta-analytic studies on the IAT indicates that there is mixed evidence for the IAT's ability to predict discriminatory behavior (Greenwald et al, 2009; Oswald et al., 2013; Greenwald, Banaji & Nosek, 2015). The authors summarize findings from two reviews that include criticisms of the IAT as having a small effect size and being a poor predictor of discriminating behaviors. Critics suggest the race IAT is not better than explicit measures of bias in predicting behavior, particularly due to the dual-category format and because multiple situational factors can affect the relationship between unconscious bias and spontaneous behavior (Oswald et al, 2013). Greenwald et al. (2015) note, however, that the reviews used different methods of analyses that resulted in small effect sizes and limited predictive validity, and that even though the studies reported these small effect sizes, they did not take into consideration the societal impact, that is, small effect sizes for discrimination towards many people or towards one person repeatedly can have a significant societal impact (Greenwald, Banaji & Nosek, 2015).

Implicit Bias in Mental Health

Merluzzi & Merluzzi (1978) examined racial bias in counseling through clinical case summaries and found that clinicians in training gave more positive ratings for Black clients to avoid being seen as racist. This indicates that there is an overt or conscious effort to act without bias. However, such overcompensation can have negative effects on

treatment. In particular, if clinical judgment is altered in an attempt to be seen as having no bias, treatment may not be as effectively delivered.

An unpublished dissertation study examined the impact of implicit racial bias on the severity of disciplinary decision-making in school mental health providers (Hoffman, 2019). The findings showed that participants with higher implicit racial bias rated student behaviors as more severe regardless of the race of the student in the vignette (Hoffman, 2019). This suggests a relationship between the perceived severity of aggressive behaviors and higher implicit bias. However, a limitation of this study design was the use of written vignette-based cases, which explicitly stated the race of the student and would have elicited more explicit and overt attitudes from participants rather than implicit attitudes. This may explain why no relationship was found between race and the perceived severity of behaviors.

Another dissertation study used written vignette-based cases to examine how feedback influences the implicit bias of counselors-in-training (Boykins, 2016). In the study, bogus feedback regarding the level of bias was provided to participants, who were then presented with a clinical vignette with client race as a variable. The results indicated that those receiving positive feedback rated the clients as having less severe mental health distress and need for treatment as compared to those who received negative feedback (Boykins, 2016). However, an identified limitation of this study was that it did not directly measure implicit bias, but rather assumed that it would be triggered by receiving the cultural feedback (Boykins, 2016). This indicates a need for more explicit connections to be made between implicit bias, and the processes that govern decision-making when confronted with such bias.

Research on Reducing Bias

Devine, Forscher, Austin & Cox (2012) developed an intervention to reduce implicit bias with long-term impact, based on Devine's (1989) prejudice reduction theory that emphasizes the need for concentrated goal-directed effort towards reducing bias to be made over time. Implicit processes, unlike explicit processes, rely heavily on context and can therefore be more enduring, requiring more time and effort to change (Devine et al., 2012). Implicit bias, according to this model, is similar to other habits formed through socialization (Devine et al., 2012). The authors state that due to the implicit nature of such bias, short-term or "one-shot" interventions are not likely to produce meaningful change and instead successful interventions need to address the contextual cues that activate such unconscious bias (Devine et al., 2012). The authors state two main processes for motivation to reduce implicit bias: awareness of the bias, and concern for the consequences of the bias (Devine et al., 2012).

The authors created their multi-faceted training intervention based on conceptual models in health behavior change, cognitive behavioral therapy, and adult learning (Devine et al., 2012) The training comprised the following strategies: stereotype replacement, counter-stereotypic imaging, individuation, perspective-taking, and increasing opportunities for contact. The training included explaining the strategies to participants, then asking them to find ways to incorporate these strategies (Devine et al., 2012). The training also emphasized to participants the amount of effort, time, and motivation that were required for the successful implementation of these strategies (Devine et al., 2012).

Results from this study showed a significant sustained reduction in implicit bias, evident through reduced scores of bias towards Black individuals (D-scores) on the Implicit Association Test (IAT) at the 4-week and 8-week measurement times (Devine et al., 2012). They also found that participants in the experimental group showed increased concern about discrimination after taking the training and education (Devine et al., 2012). The intervention, therefore, seemed to increase personal awareness of bias and broader concern for discrimination in individuals. For future research, the authors suggest developing specific behavioral, cognitive, affective, and neural mechanisms for the intervention and determine the components that impact how effectively these strategies are being employed (Devine et al., 2012).

The findings by Devine et al. showed that long-term reduction in bias is related to an increase in personal awareness and concern for discrimination and that their intervention's success is related to effort and self-regulation (Devine et al., 2012). A similar finding was established through Livingston & Drwecki's 2007 study which found that participants' susceptibility to being affectively conditioned predicted non-prejudice or bias towards Black individuals. This study emphasized that repeated exposure, conditioning, and successful regulation of affective responses are also critical to reducing bias rather than sheer will alone (Livingston & Drwecke, 2007). Rather, they suggest that racial bias against Blacks can be reduced through positive experiences and exposure to Black individuals, and that practice, selective attention, and interpersonal connections can gradually cause a shift in racist attitudes (Livignston & Drwecke, 2007).

Kang and colleagues (2014) examined the effects of loving-kind meditation on implicit intergroup bias and found that participants who practiced loving-kind meditation

for 6 weeks showed decreased levels of implicit intergroup bias. The study examined implicit bias towards both Black individuals and homeless individuals and found that reduced psychological stress mediated the relationship between meditation practice and implicit bias against homeless individuals, but it did not mediate the relationship between practice and racial bias (Kang, Gray, Dovidio, 2014).

Similarly, Hunsinger, Livingston & Isbell (2012) also studied the impact of loving-kindness meditation on affective learning and cognitive control. The findings suggested that the loving-kindness meditation practice was linked with more positive affective reactions to neutral stimuli, and increased ability to exercise cognitive control (Hunsinger et al., 2012). This increased positive affective learning suggests a desire for all human beings to experience positive environmental and psychological conditions and is likely to produce positive feelings in participants towards strangers (Hunsinger et al., 2012). An important distinction highlighted by the study is that meditations that focus only on developing an awareness of internal body states are not likely to produce affective learning, but that the loving-kindness meditation's focus on compassion helps to create such learning. Based on prior research by Livingston and Drwecki (2007), the ability for affective learning/conditioning predicts nonbiased behaviors, which implies that the loving-kindness meditation can be an important step in that direction.

Affective Responses

Cheon et al. (2015) stated that a potential explanation for genetic predisposition to implicit bias can be that the allele responsible is linked with "heightened sensitivity to evaluative/fear conditioning". According to Livingston & Drwecke (2007), implicit attitudes are formed through associative learning, and therefore general affective

mechanisms can also influence such biases (Livingston & Drwecke, 2007). In their review of literature, they found that conditioning influences attitude formation and that it is likely that individuals with lower levels of bias are simply better self-regulators, which would also make them more skilled at emotional regulation (Livingston & Drwecke, 2007). The authors elaborate in their discussion that individuals who are able to reject negative affective associations broadly are also likely to reject negative associations made towards racial minority groups such as Black individuals (Livingston & Drwecke, 2007).

Prior research has categorized emotional experiences into two broad factors, Positive Affect, and Negative Affect (Watson & Clark, 1994). These factors have been consistently tested across a range of variables including time, language, and cultures. They elaborate that the two factors account for most of the range in changes in self-reported affective states, and some of the variance in mood as well (Watson & Clark, 1994). As reviewed by the authors, Watson & Tellegen (1985) proposed a hierarchical model for organizing affective states into correlated but still unique descriptors, which uses higher-level descriptors for the valence of mood and lower-level descriptors for the specific content of the affective state. They developed the Positive and Negative Affect Schedule which uses this model to provide information regarding those affective states in terms of valence and content (Watson & Clark, 1994).

Response to IATs can often elicit strong emotional states, due to a desire to appear unbiased (Schlacter & Rolf, 2014). A qualitative review found that those who take the race IAT are more likely to respond in the following ways: reporting results, questioning the legitimacy of the IAT, explicit in-group/out-group behavior, and humor

(Schlacter & Rolf, 2014). These responses indicate varying levels of being affectively charged and can illustrate the varying ways in which individuals cope or regulate such discomfort (Schlacter & Rolf, 2014).

Clinical Judgment

Clinical judgment consists of multiple different areas, including the description of personality and pathology, making diagnostic impressions, case formulation, and predicting behaviors (Garb, 2005). Clinical judgment literature is rooted in romantic and empiricist traditions (Garb, 2005). Research in the area of clinical judgment is based on multiple methods of inquiry, including interrater reliability, comparing decision making, impressions or opinions across multiple providers, and comparing generalizability of judgment to different or larger sources of data (Garb, 2005).

Research suggests that providers make diagnostic judgments based on comparisons to prototypes of normal behavior which can vary significantly across providers (Garb, 2005). They also make diagnostic impressions based on causal theories about pathology, i.e., the degree to which providers contextualize causes for pathology (Jenkins & Kim, 2018) or the attention paid to the cause of behaviors and pathology (Weine & Kim, 2019). When presented with false information regarding a hypothetical client, clinicians are more likely to pay attention to and recall false client reactions rather than contextual or causal information (Weine & Kim, 2019). This demonstrates the potential fallibility of clinical cognitive processes, and yet relatively little attention is paid to these processes in direct supervision or training (Garb, 2005).

Although there is generally higher interrater reliability between clinicians when using DSM diagnoses, this often occurs in the context of structured interviews (Garb,

2005). In routine clinical practice, there is higher variability between providers in their diagnostic impressions (Garb, 2005). Furthermore, more experience is not related to better diagnostic impressions, despite more familiarity with diagnostic criteria outlined by the DSM (Garb, 2005). This emphasizes the discrepancy and variability in clinical judgment for providers that can make them prone to responding with bias.

CHAPTER 3: METHOD

Participants and Procedure

Participants for this study were mental health professionals and trainees. Participants were eligible to participate if they currently provide, or have provided in the past, direct, face-to-face, individual therapy. Exclusion criteria for this study were set to any mental health personnel who have not provided or will not be providing individual psychotherapy as part of professional training or occupation.

Participants were recruited through sharing recruitment information with professional listservs, direct online email recruitment to mental health treatment sites and training programs across the country, and searching Psychology Today for psychologists with listed contact information in prominent cities across the US, including New York, Los Angeles, Chicago, Philadelphia, Seattle, and Miami. Participants in the study were also encouraged to share recruitment information within their professional networks. Recruitment information included the link to the Qualtrics survey containing the study's informed consent and measures

Participants were presented with the informed consent at the beginning of the study, after which they were taken to a demographic survey. Next, all participants were asked to complete the Race Implicit Association Test (Race IAT; Greenwald et al., 1998) administered through Qualtrics using IATgen to generate survey-software compatible IATs (Carpenter et al., 2019), for which they required access to the use of a physical

keyboard. After taking the IAT, participants were randomly assigned to one of three conditions: neutral feedback, negative feedback, and positive feedback. Based on the condition they were assigned, the feedback provided a statement about their levels of implicit bias measured through their performance on the IAT (See [Appendix E](#)). The feedback was manipulated, and not related to participants' measured scores on the Race IAT.

After receiving one of the three feedback conditions, participants were asked to complete a measure of their racial affect, through an adapted PANAS-X ([Appendix B](#); Watson & Clark, 1998; Czopp & Monteith, 2003). Participants were then directed to watch a short, scripted video vignette with a hypothetical client who presented as Black and female describing anxiety and depressive symptoms (See [Appendix C](#) for video script). The video vignette included only the hypothetical client and no therapist or providers. The same video was shown to all participants for consistency in client characteristics. Participants were then asked to rate their level of agreement with two diagnoses for the client in the vignette: Major Depressive Disorder and Generalized Anxiety Disorder. Next, participants were also asked to rate the potential severity for each diagnosis (See [Appendix D](#)).

At the conclusion of the study, participants were debriefed regarding the use of manipulated feedback in the study. Participants were asked if they wanted to withdraw their data collected for the study. Participants also had a chance to download debrief and informed consent forms. Lastly, participants were offered the chance to receive their actual IAT scores after the conclusion of the study. Participants were compensated for their time through a digital gift card.

Measures

Implicit racial bias is an independent variable in this study, which was measured through the administration of the Race Implicit Association Test. The first dependent variable for the study is *clinical judgment*, measured through diagnostic impressions formulated in response to a clinical vignette. Diagnostic impressions are operationally defined as a) the degree of agreement with diagnoses and b) perceived severity of diagnoses. The mediating variable in the study is racial affect, operationalized as the self-reported affective state following receipt of IAT feedback, measured through an adapted Positive and Negative Affect Schedule (PANAS-X; Watson & Clark, 1994).

Race IAT. The Implicit Association Test was developed by Greenwald, McGhee, and Schwartz (1998) to assess automatic associations through a categorization task. The Race IAT shows a series of images of Black and White faces and “positive” and “negative” descriptor attribute words. The categorization task focuses on the broad categories of “Good” and “Bad”. Items are presented in a very short time and require prompt responses. The time taken to match the stimuli with each category represents the score of the individual’s implicit bias.

As noted in the previous chapter, the predictive validity of the IAT has been met with mixed findings. Despite mixed findings, there appears to be some evidence for the utility of the IAT as a direct measure for unconscious racial attitudes and discriminatory behaviors of the Black-White Race IAT $r = 0.2$ (Greenwald, Banaji & Nosek, 2015). Further, IAT scores are significantly more valid ($r = 0.236$) in predicting implicit bias than self-report measures ($r = 0.117$) (Greenwald, Poehlman, Uhlmann & Banaji, 2009; Greenwald, Banaji & Nosek, 2015; Boysen, 2010).

In this study, the Race IAT was administered using survey-software compatible IATs designed through IATgen (Carpenter et al., 2019). Carpenter (2019) tested validity for the survey-software IATs through a series of validity studies and found that the adapted versions administered through Qualtrics were nearly identical to traditionally administered IATs ($r = 0.578, p < 0.001$).

PANAS-X. Watson & Clark (1998) developed the Positive and Negative Affect Schedule- Extended form (PANAS-X) to assess specific emotional states. The PANAS-X is comprised of 60 items that are categorized under the following different scales: Fear, Sadness, Guilt, Hostility, Shyness, Fatigue, Surprise, Joviality, Self-Assurance, Attentiveness, and Serenity. The scale asks participants the extent to which they experience the affective states, and consists of words and phrases that describe affective states, such as “cheerful”, “fearless”, “amazed”, “scared”, “angry at self” that are rated on a 5-point Likert scale ranging from “very slightly or not at all” (score of 1) to “extremely” (score of 5).

The various scales of the PANAS-X show high convergent validity with other measures of state affect, including the Profile of Mood Scales (POMS) and the Beck Depression Inventory (BDI). The correlation coefficients range between 0.85 to 0.91 for the POMS, and between 0.59 to 0.74 for Depression scales (Watson & Clark, 1998). Additionally, the PANAS-X showed greater discriminant validity compared to the POMS and various scales such as the BDI, the State-Trait Anger Scale, the STAI Anxiety Scale, and the Hopkins Symptoms Checklist depression and anxiety scales.

Individual items on the PANAS-X may be administered in accord with the researchers’ aims and goals. For this study, racial affect was measured by selecting and

modifying PANAS-X items to mirror those on the Racial Affect scale developed by Czopp & Monteith (2003). The final modified scale ([Appendix B](#)) consisted of 20 items including Afraid, Amused, Angry, Angry at self, Annoyed at others, Ashamed, Blameworthy, Disgusted with self, Dissatisfied with self, Distressed, Embarrassed, frightened, Guilty, Hostile, Irritable, Nervous, Scornful, Surprised, Uncomfortable, Upset. A higher score obtained on this scale is indicative of high negative affect related to racial cues.

Clinical judgment. The dependent variables in this study examined diagnostic impressions as part of clinical judgment. These consisted of four single-item questions regarding the degree to which participants agreed with, and potential severity for two DSM-5 diagnoses consistent with the client vignette, Major Depressive Disorder, and Generalized Anxiety Disorder. Since the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5) is the most commonly used clinical diagnostic tool (APA, 2013), only the two commonly used DSM-5 diagnoses were included.

Demographic questionnaire. A demographic questionnaire will be given to participants to gather information regarding participants' gender identity, racial/ethnic identity, age range, clinical field (Counseling, clinical psychology, social work, etc.), number of years providing individual therapy. No identifying data will be collected in the demographic questionnaire.

Power Analysis

G*Power software was used to conduct a power analysis for the study. Boykins (2016) reviewed effect sizes in various studies between 1996-2008 and found that the effect of feedback about implicit bias on behavior ranged from effect sizes between 0.1

and 0.2. A more recent unpublished study by Hoffman (2019) found a correlation coefficient of $r = .19$ for IAT D scores and rated severity of educational outcomes for Black students. Since published experimental studies examining the impact of implicit bias and clinical judgment are limited, the study aimed to observe at least a large effect size. A power analysis for a MANOVA design with three groups (i.e., pro-White feedback, pro-Black feedback, and neutral IAT feedback) and four response variables (i.e., diagnostic agreement ratings for depression and anxiety, diagnostic severity ratings for depression and anxiety) using G*Power with effect size estimated at 0.16, power at 0.80, and an alpha level of 0.05, resulted in a required sample size of 51.

Data Analysis Plan

The data were analyzed through a set of preliminary analyses using SPSS 25.0 to examine the data, followed by a multivariate analysis of covariance, and a mediation analysis using a bootstrapping method through PROCESS v3 (Hayes, 2017). The preliminary analyses included a missing data analysis and a check for normality through skewness and kurtosis. Further, outliers were examined, and the data were prepared for additional analyses. Missing data were examined for non-random patterns using Little's Missing Completely at Random (MCAR) test.

A primary analysis was conducted through a MANCOVA with each of the four dependent variables, feedback condition as a fixed factor, and IAT d-score as the covariate. Assumptions for multivariate analysis of covariance include the following: dependent variables are measured at the interval or ratio level, independent variables are categorical, and covariates are continuous. Additional assumptions for MANCOVA are independence of observations in each group, no univariate or multivariate outliers,

multivariate normality, linearity between each group and each dependent variable, homogeneity of regression for the covariate and dependent variables, no significant multicollinearity, and homogeneity of variance-covariance. (Gamst & Guarino 2008). SPSS was used to test each of these assumptions.

Next, racial affect was examined as a potential mediator for the relationship between feedback and clinical judgment. SPSS PROCESS macro was utilized to conduct the mediation analysis through a bias-corrected bootstrapping method for each dependent variable (Hayes, 2017).

CHAPTER 4: RESULTS

This study aimed to understand the effect of providing feedback on implicit bias and the mediating role of racial affect on clinical judgment in a sample of mental health providers in the United States. The research questions were: 1) Is there a relationship between implicit racial bias and clinical judgment? 2) Does providing feedback on race-related implicit bias affect providers' clinical judgment? and 3) Does racial affect explain the relationship between receiving feedback on race-related implicit bias and clinical judgment?

Data Preparation

Participants completed the study through an online survey using Qualtrics which included all questionnaires and the Qualtrics-adapted online Implicit Association Test (Carpenter et al., 2019) generated through IATgen. Data was collected beginning March 2020 and through March 2021. Completed survey data was downloaded from Qualtrics and analyzed using SPSS 25.0 software. The data file was examined for entries that were incomplete as follows: participants who started but did not finish the study, participants who did not take the IAT, and participants who did not view the video vignette. Of the total of 121 collected responses, 47 responses were removed due to being incomplete.

IAT D-scores were calculated by uploading a CSV file of completed Qualtrics data on the Shiny applet IAT analyzer, designed by Carpenter et al. (2019) to analyze IATs generated using IATgen. The software detected one entry that exceeded the time

limit for obtaining valid IAT D-scores and three additional responses that were invalid due to the number of errors made. All four invalid IAT responses were coded as -99 in the data file, and removed from the analysis, resulting in a sample of $N = 74$.

Missing Values Analysis

The sample of $N = 74$ was examined for missing values. Variables of interest in the study were measured using a Qualtrics slider scale question, that was positioned in the middle by default on Qualtrics. Values on these measures that appeared missing were replaced with the default middle score for those scales, assuming that participants meant to leave sliders at those positions. A missing Values Analysis was conducted on the data using Little's test and found no additional missing values on the variables on interest, and some missing demographic information including race, gender, and professional identity.

Outliers

The data were examined for univariate and multivariate outliers using three tests: Mahalanobis distance, Cook's distance, and Leverage test, as well as examining stem-and-leaf plots, and standardized residuals analysis. The scores for all three tests were examined for outliers at $p < 0.001$, and plots were analyzed visually for outliers. No participants showed significant outlier scores on more than one measure, and all scores were retained.

Participants

The final sample consisted of 74 participants, comprising demographic characteristics outlined in Table 1.

Table 1 Demographic Characteristics for Sample (N=74)

<i>Variables</i>		<i>n</i>	<i>%</i>
Gender	Female	60	82.2
	Male	7	9.6
	Non-binary	4	5.5
	Genderqueer	2	2.7
Race	White	39	48.8
	Black	4	5.0
	Asian/Asian American	17	23.0
	American Indian/Alaska Native	1	1.4
	Hispanic/Latinx	11	14.9
	Multiracial	3	4.1
	Self-identified: Middle Eastern	2	
	Self-identified: Iranian	1	1.4
	Self-Identified: Armenian	1	1.4
	Undisclosed	1	1.4
Age	20-25 years	23	31.1
	25-30 years	35	47.3
	30-35 years	9	12.2
	above 35 years	7	9.5
Degree/Field	Clinical Psychology	24	32.4
	Counseling Psychology	36	48.6
	Mental Health Counseling	7	9.5
	Social Work	5	6.8
	School Counseling/School Psychology	2	2.7
Trainee Status	Yes	63	85.1
	No	11	14.9

Preliminary Analyses

Descriptive statistics were obtained for all variables used in the study and presented in Table 2 with Cronbach's alpha for scale measures. Dependent variables for this study consisted of single-item questions regarding clinical judgment about the degree of agreement with diagnoses and severity of diagnoses. The independent variable was the score on the Implicit Association Task (Greenwald et al., 19..; Carpenter et al., 2019),

along with the assigned bias feedback condition. The mediating variable being examined was racial affect, which was calculated using an adapted PANAS-X inventory (Watson & Clark, 1998) based on the racial affect scale (Czopp & Monteith, 2003).

Table 2 Descriptive Statistics for Study Measures

<i>Measure</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Range</i>	<i>α</i>
AgreeMDD ₁	7.00	2.00	1.00	10.00	9.00	-
AgreeGAD ₂	5.57	1.91	1.00	10.00	9.00	-
SevMDD ₃	6.31	1.79	1.00	10.00	9.00	-
SevGAD ₄	5.01	1.97	1.00	10.00	9.00	-
Racial Affect	16.87	14.0	0	66	66	.921
IAT D-Score	-.22	.47	-1.06	1.08	2.13	.856

1=Agreement with the diagnosis of Major Depressive Disorder, 2= Agreement with the diagnosis of Generalized Anxiety Disorder, 3= Severity of Major Depressive Disorder, 4= Severity of Generalized Anxiety Disorder

Testing of Assumptions: Normality

The assumption of normality for each variable was tested by generating histograms and examining skewness and kurtosis values within the suggested range of -3 to +3 (Gamst, Meyers & Guarino, 2008). Values for skewness and kurtosis were within the acceptable range (presented in Table 3), and histograms were approximately normal. Additionally, to assess for the assumption of multivariate normality, normality was tested for each dependent variable by each of the three feedback conditions and was within the acceptable range. Multivariate normality values are also reported in Table 3.

Table 3 Means, Standard Deviation & Univariate and Multivariate Normality; Skewness & Kurtosis Values

<i>Variable</i>		<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>SE</i>	<i>Kurtosis</i>	<i>SE</i>
AgreeMDD	Total	7.00	2.00	-1.201	.293	1.925	.578
	Condition 1	6.48	2.33	-1.242	.481	1.063	.935
	Condition 2	7.02	2.03	-1.050	.481	2.380	.935
	Condition 3	7.48	1.50	-.461	.501	.136	.972
AgreeGAD	Total	5.57	1.91	-.326	.293	.652	.578
	Condition 1	5.19	2.05	.039	.481	.790	.935

	Condition 2	6.08	1.81	-.445	.481	2.270	.935
	Condition 3	5.46	1.82	-.636	.501	.540	.972
SevMDD	Total	6.31	1.79	-.783	.293	.832	.578
	Condition 1	6.17	1.54	-.541	.481	1.065	.935
	Condition 2	6.20	1.68	1.212	.481	2.221	.935
	Condition 3	6.57	2.15	-.774	.501	.156	.972
SevGAD	Total	5.01	1.97	-.025	.293	.081	.578
	Condition 1	4.79	1.86	.343	.481	.321	.935
	Condition 2	5.52	1.93	.068	.481	1.061	.935
	Condition 3	4.72	2.10	-.421	.501	-.524	.972
Racial Affect		0.84	0.70	.998	.293	1.050	.578
D score		-0.23	0.47	.439	.293	-.081	.578

Testing of Assumptions: MANCOVA

The MANCOVA assumptions of linearity were tested using scatterplots of the data by feedback condition. Scatterplots indicated linear relationships between the DVs and IV for each feedback condition, and the assumption of linearity of regression was met. Further, a scatterplot was generated for the DVs and the covariate (D-scores) which demonstrated a linear relationship between the variables, and the assumption of linearity between covariate and DV was met.

The MANCOVA assumption of homogeneity of regression was tested by running a custom MANCOVA model using SPSS with an interaction term. The interaction term was non-significant for any variables in the model at $F(2) = 0.278, 0.408, 0.419, 2.231, p > 0.05$ indicating that this assumption was met. Additionally, the homogeneity of covariance and variance was tested using Lavene's test and Boxes' M when running the MANCOVA analysis. Lavene's test was not significant for any variable at $p < 0.05$ [AgreeMDD: $F(2, 64) = 0.924, p = 0.404$; AgreeGAD: $F(2, 64) = 0.212, p = 0.809$; SevMDD: $F(2, 64) = 2.4, p = 0.09$; SevGAD: $F(2, 64) = 0.227, p = 0.797$] and Boxes' M was not significant at $F(20) = 1.63, p = 0.032 > 0.001$. Thus, assumptions of homogeneity

of covariance and variance are met. Additionally, as indicated in the outlier analysis, no significant outliers were found within each DV in each feedback condition or group.

Variables

Correlations within all study variables and demographic variables are presented in Table 4 using Pearson’s correlation coefficient. Age was significantly negatively correlated with the perceived severity of Generalized Anxiety Disorder (GAD) $r = -0.309$. No other demographic variable had significant correlations with the study variables. As expected, the degree of agreement with Major Depressive Disorder was significantly correlated with the perceived severity of Major Depressive disorder $r = 0.573$. Similarly, the degree of agreement with GAD was significantly correlated with perceived severity for GAD ($r = 0.716$). However, it is important to note that despite significant correlations among these variables, since the r values are < 0.8 , there is no significant multicollinearity (Harlow, 2014). Furthermore, racial affect was significantly correlated with the perceived severity of GAD ($r = 0.247$), and IAT D-scores were significantly correlated with the degree of agreement with GAD.

Table 4 Correlation Matrix of Study Variables

Variables	1	2	3	4	5	6	7	8	9
1. Age	1	.132	.46	-.23	.065	-.178	-.179	-.309**	.127
2. Gender		1	.039	.12	-.141	.068	.148	.202	.180
3. Race			1	-	.023	.041	.078	.086	.208
4. Racial Affect				1	.077	.149	.136	.247*	-.225
5. AgreeMDD					1	.155	.573**	-.141	.013
6. AgreeGAD						1	.016	.716**	.305*
7. SevMDD							1	.182	-.042
8. SevGAD								1	.175
9. IAT D score									1

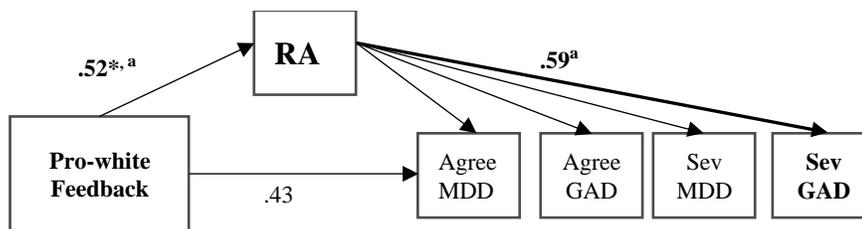
* $p < 0.05$; ** $p < 0.01$

Primary Analysis

In order to test the first hypothesis, an initial MANCOVA was used to test the relationship between feedback condition (fixed factor), clinical judgment variables (dependent variables), and implicit bias scores (covariate). The overall multivariate analysis did not result in a significant result for feedback condition when using Wilk's $\Lambda = 0.890$, $F(8, 120) = 0.916$, $p = 0.508$, partial $\eta^2 = 0.057$. However, the within-subjects analysis revealed that IAT D-scores were significantly related to the degree of agreement with GAD $F(1) = 6.801$, $p = 0.011$.

Mediation Analysis

Figure 1. Mediation model with path coefficients



* p value < 0.05 ; a = significant indirect effects; RA= Racial Affect

In order to test the second hypothesis, a mediation analysis was conducted. The PROCESS macro (Hayes, 2013) was used for SPSS 25.0 to examine the mediation effect of racial affect on the type of feedback and clinical judgment. The mediation analysis included the multi-categorical independent variable of feedback condition, using the indicator coding system on PROCESS to compare the control group with negative and positive feedback conditions respectively. Four different sets of analyses were conducted for each dependent variable. Each of the four analyses generated two separate path coefficients for the independent variable, presented in Table 5.

Table 5 Path coefficients in Mediation Analysis

	Path Coefficients, β				
	to Racial Affect	to AgreeMDD	to AgreeGAD	to SevMDD	to SevGAD
Racial affect	-	.21	.26	.42	.59
Negative/Pro-white feedback X ₁	.52*	.43	.77	-.19	.41
Positive/Pro-black feedback X ₂	.06	.21	.25	.37	-.11

* $p < 0.05$

The total and direct effects of feedback were not significantly linearly related to any dependent variable. However, there was a significant linear relationship between the feedback condition and racial affect $F(2, 67) = 4.21, R^2 = 0.112, p = .018$. In particular, comparing the control group with the pro-white/negative feedback condition resulted in a significant linear relationship with racial affect, $\beta = .522, t(67) = 2.67, t(67) = 0.31, SE = 0.195, p = 0.0095$, indicating that those in this group rated racial affect as higher than the control group. No significant relationship existed for the pro-black/positive feedback group, $\beta = .061, SE = 0.195, p = 0.756$. Further, no significant direct effects were observed for any dependent variable.

Relative indirect effects were examined for calculated using a bootstrapping method for each pathway to test for mediation, and results are listed in Table 6. An analysis of these indirect effects indicated that mediation occurred for only one pathway in one model when examining the relationship between negative or pro-white feedback on the perceived severity of GAD, Effect = 0.308, $SE = .207, 95\% \text{ CI} = [0.0022, 0.791]$.

Table 6 Indirect Effects in Mediation Analysis

Dependent Variable	Model	Effect	Standard Error	95% CI	
AgreeMDD	Pro-white Feedback→ RA →AgreeMDD	.11	.19	-0.25	0.54
	Pro-black Feedback→ RA →AgreeMDD Total	.012	.07	-0.11	.20
AgreeGAD	Pro-white Feedback→ RA →AgreeGAD	.13	.17	-0.17	.51
	Pro-black Feedback→ RA →AgreeGAD SevMDD Total	.016	.072	-0.12	0.19
SevMDD	Pro-white Feedback→ RA →SevMDD	.22	.20	-0.075	.70
	Pro-black Feedback→ RA → SevMDD Total	.026	.10	-0.15	.27
SevGAD	Pro-white Feedback→ RA →SevGAD	.31	.20	.0022	.80*
	Pro-black Feedback→ RA → SevGAD Total	.036	.12	-0.19	.29

*The indirect effect is statistically significant at the $p < .05$ level.

Lastly, because indirect effects for racial affect were significant between the control and pro-white feedback conditions, correlations were examined between each racial affect item (Table 7). There were several significant correlations between the individual items, with ‘amused’ correlating significantly at $p < 0.05$ with all dependent variables in the pro-white condition, while ‘blameworthy’ was significantly related to all dependent variables for the control group. ‘Hostile’, ‘scornful’ and ‘dissatisfied with self’ were all associated with the control group; while ‘afraid’, ‘irritable’, and ‘upset’ were associated with the pro-white bias feedback group. Although the number of items that were significantly correlated did not vary by condition, it appears that the strength and significance of the correlations were stronger for the pro-white bias feedback condition.

Table 7 Correlations between variables and racial affect items for control and negative feedback groups

Racial Affect	Variables									
	AgreeMDD		AgreeGAD		SevMDD		SevGAD		DScore	
	C	PW	C	PW	C	PW	C	PW	C	PW
Afraid	.009	.426*	-.017	.023	.018	.119	.007	-.029	.468*	-.443*
Amused	-.177	-.442	-.316	-.648	.053	-.550	.056	-.572	-.169	.015
		*		**		**		**		
Angry	.073	.039	-.057	-.166	-.135	-.150	.210	-.216	-.088	-.264
Angry at self	.127	-.048	-.128	-.253	.005	-.054	-.230	-.219	.092	-.206
Annoyed at others	-.171	.347	.172	.210	.014	.148	.245	.148	.443*	-.323
Ashamed	-.342	.135	.396	-.019	-.341	.073	.348	-.025	.134	-.263
Blameworthy	-.554**	.413	.451*	-.002	-.506*	.251	.463*	-.062	-.113	-.299
Disgusted with self	-.385	-.116	-.012	-.062	-.111	-.144	.487*	.025	-.151	-.212
Dissatisfied with self	-.435*	.104	.133	-.121	-.290	.150	.231	-.130	-.459*	-.206
Distressed	-.276	.286	.065	.078	-.368	.163	.005	.078	-.228	-.406
Embarrassed	-.297	.095	.009	-.064	.020	.073	.391	-.109	.006	-.287
Frightened	-.196	.294	-.159	.039	.135	.056	.210	.004	.256	-.398

Guilty	-.027	.118	-.175	.110	-.051	.187	-.195	.223	.053	-.281
Hostile	-.501*	.242	-.102	.077	-.064	.272	.489*	.173	-.153	-.410
Irritable	-.024	.462*	-.042	-.075	.015	.340	.332	-.173	-.026	-.292
Nervous	-.244	.362	.139	.074	-.039	.312	.247	.079	.039	-.365
Scornful	-.501*	.119	-.102	-.117	-.064	.092	.489*	.016	-.153	-.252
Surprised	.120	-.029	.249	.123	.107	.259	.266	.285	-.022	.080
Uncomfortable	-.077	.222	.431*	.121	-.452*	.341	.097	.118	.142	-.170
Upset	.050	.431*	.146	-.048	.000	.437*	.210	-.011	-.111	-.384

*C=control; PW= pro-white feedback condition; *p<0.05, **p<0.01*

CHAPTER 5: DISCUSSION

The objectives of this study were to examine 1) if there is a relationship between race-related implicit bias and clinical judgment, 2) whether receiving feedback about implicit bias affects clinical judgment and 3) whether racial affect mediates the relationship between receiving feedback about racial bias and clinical judgment. Two manipulations were used in this study: a direct measure of implicit bias using survey-software compatible Race IAT (Greenwald et al., 1998; Carpenter et al., 2019), and randomly assigned feedback about levels of implicit bias.

The first hypothesis was that higher implicit bias scores for race would be significantly positively correlated with higher ratings of distress and more severe diagnostic impressions. This hypothesis was partially supported by the results. There was a significant positive correlation between higher levels of implicit bias towards Black individuals and agreement with a diagnosis of Generalized Anxiety disorder for the case vignette in this study. Contrary to expectations, there was no significant relationship between severity of anxiety or depression diagnosis and implicit bias scores. This is the first study to examine a direct relationship between implicit bias and clinical judgment in a population of mental health providers. Although there is some evidence to suggest there is a relationship between implicit bias and clinical judgment in healthcare (Green et al., 2007), this finding suggests that implicit bias may play a role in diagnostic thinking for mental health providers as well.

The second hypothesis was that receiving feedback on racial bias would affect participants' clinical judgment. Results did not support this hypothesis. Since prior research suggests some relationship between both feedback and racial affect, and racial affect and clinical judgment, it may be that features of the study design and sample played a role in this study's failure to replicate previous findings. Clinical judgment was only measured through diagnostic impressions and each of the dependent variables was captured with single-item measures. Single-item measures may not sufficiently capture the nuanced process of clinical judgment and may be limited in their content validity. Single-item measures can also limit variance in measurement and potentially impact the power of statistical tests. Further, the single-item measures of the dependent variables relied on self-report, which can have the potential for errors and be influenced by social desirability effects. A potential direction for future studies may be to examine other aspects of clinical judgment, such as decision-making, case conceptualization, intervention choice, and treatment planning, and incorporating observational ratings in measuring these variables.

The third hypothesis was that racial affect would mediate the relationship between the type of feedback received and clinical judgment. Overall, there was limited support for this hypothesis, as the majority of mediation tests were non-significant, indicating a potential need to explore additional explanations for variability in clinical judgment. However, the study found that racial affect did mediate the effect of receiving pro-white IAT feedback on the severity of participants' anxiety ratings. Additionally, the results suggested that racial affect was significantly associated with the type of feedback received, in particular with negative, pro-white implicit bias feedback. That is,

participants who were given feedback about having a slight pro-white bias reported higher negative racial affect than participants in the control group who were given feedback about having no bias. This finding is consistent with previous literature on racial affect (Czopp & Monteith, 2003; Spanierman, Beard & Todd, 2012) and provides empirical support for the relationship between feedback or awareness about implicit bias and racial affect.

Participant age was also significantly associated with the perceived severity of GAD. That is, the higher a participants' age, the more severe were the ratings of GAD. This finding needs to be interpreted with caution, given that the age variable was presented as a range rather than a continuous variable. Furthermore, the number of participants in each age range category varied, with fewer participants in the older categories. Thus, while the study results may indicate a relationship between the two variables, more information is needed to support conclusions related to this relationship.

The study also explored specific differences between racial affect items reported by participants in the neutral feedback condition compared to the slight negative, pro-white bias feedback condition. Results indicated that for those in the neutral feedback condition, the affect items of blameworthy, hostile, scornful, and dissatisfied with self were related to dependent variables, while for those in the pro-white feedback condition, affect items of amused, afraid, irritable, and upset were related to dependent variables. This finding is consistent with Grzanka et al. (2019) in that there is a distinction between self-focused and other-focused emotion words and suggests a need for further qualitative research to examine the experience of racial affect based on receiving feedback.

Limitations

This study has several limitations that can impact the interpretation of findings and results. First, the sample for this study was adequate to observe a large effect size but was inadequate to observe a medium or small effect size. The sample was also predominantly white (See [Table 1](#) for participant demographic information). For the analysis, Black-identified participants were removed given the study's primary aim to examine anti-Black bias in non-Black mental health providers. Thus, results may not be generalizable to mental health providers across varying demographic identities.

Additionally, this study was conducted during a global pandemic, amid significant changes to the delivery of mental health services. As such, the representativeness of the sample selected during this time may not necessarily capture the responses by mental health providers during different circumstances. Furthermore, race-based violence continued to gather more national awareness in the United States during 2020, following the murders of George Floyd and Breonna Taylor. It is likely that due to this sociopolitical climate, there was heightened collective awareness about the impact of implicit biases, which can potentially impact the salience of bias and feedback related to bias for participants.

Lastly, as noted earlier, the strength of the validity evidence for the Implicit Association Test (Greenwald et al., 1998) has been called to question. In particular, critics have asserted that instrumentation that measures reaction time is not specifically related to the manifestation of bias (Oswald et al., 2013; Greenwald, Banaji & Nosek, 2015). However, meta-analyses that have examined validity and reliability for the IAT have found that there is greater evidence in support for the use of IAT in measuring

implicit or unconscious associations (Greenwald, Banaji, & Nosek, 2015; Carpenter et al., 2019). Additionally, the IAT remains the only instrumentation available for the measurement of implicit bias that does not rely on explicit self-report. Because self-report measures may be considerably impacted by self-correction bias and social desirability, measurement of implicit bias is limited without additional instrumentation.

Implications for Practice

Despite limitations, this study has several implications for clinical mental health practice. First, this study serves as empirical evidence for the relationship between measured implicit bias and aspects of clinical judgment, in particular agreement with the diagnosis of GAD. It serves to highlight that when controlling all other therapist and contextual factors, implicit bias does impact the degree to which providers may have confidence in a particular diagnosis. Because diagnoses can be critical for the type of treatment and access to care, it can significantly impact outcomes for racially and ethnically minoritized clients.

Further, the study did not find a relationship between feedback and clinical judgment. This may indicate that providing feedback once, or awareness alone, may not be effective compared to more specific follow-up about implicit biases. Consistent with deliberate practice techniques, it may be more useful to focus training on understanding and processing the feedback about implicit biases. Anti-racist frameworks for the provision of psychotherapy may serve as a useful tool to mitigate some of these effects (Grzanka, Gonzalez & Spanierman, 2019).

Finally, the study highlights the challenge in empirically examining the function of implicit biases in clinical settings, and subsequently the challenge in focusing clinical

training on managing implicit biases. While feedback and awareness of implicit biases may be important, training can also be supplemented through attention to conditions that may increase the likelihood of implicit biases such as situational ambiguity, or demand for quick clinical decision making. Further research on the relationship between feedback and racial affect will likely benefit the training of mental health providers.

Recommendations for Research

There are several potential directions for future research in this area. First, it is recommended that the relationship between implicit bias and clinical judgment is directly examined in clinical settings. For example, future studies can examine how mental health providers respond to specific feedback about implicit bias from their supervisors and clients, and how this may impact their clinical judgment through the course of treatment. Further, incorporating measurements from multiple sources, such as observers and clients can strengthen the understanding of the relationship between these variables and mitigate some challenges posed due to instrumentation.

A second recommendation is to examine the influence of implicit bias on clinical judgment over time. In particular, it may be helpful to examine how both implicit bias and racial affect are related to therapeutic alliance and specific client outcome measures over time. It may also be helpful to explore these dynamics specifically with cross-racial therapeutic dyads. Given the shifting sociopolitical context, it may also be useful to explore these variables at different points in time.

Because this study examined implicit racial bias towards Black individuals, it is recommended that future research explore the relationship between implicit bias and clinical judgment with clients having different intersectional identities. Specifically, the

role of gender and race as it relates to clinical judgment can be further explored by examining differences between responses to a Black male, female or non-binary client.

Conclusion

In conclusion, this study was novel in examining implicit racial bias using an IAT and clinical judgment within the practice of mental health treatment. The study provides some empirical evidence to suggest that automatic preferences and biases are associated with the clinical judgment of providers. Additionally, the results of this study suggest training clinicians to manage their racial affect may be a useful strategy for mitigating the effect of confronting one's racial biases on clinical judgment.

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Appendix A

Demographic Questionnaire

Please select your age range:

under 20 years

20-25 years

25-30 years

30-35 years

above 35 years

Please select your racial/ethnic identity: [select all that apply]

White

Black/African American

Asian/Asian American

American Indian/Alaska Native

Native Hawaiian Pacific Islander

Hispanic/Latinx

Multiracial

Other: please specify

What gender do you identify with?

Female

Male

Non-binary

Genderqueer

Transgender

Prefer not to disclose

Prefer to self-identify

Please select the number of years you have engaged in clinical work.

less than 2 years

2-5 years

5-10 years

Over 10 years

What field or profession do you identify most with?

Clinical Psychology

Counseling Psychology

Mental Health Counseling

Social Work

Psychiatry

Mental Health Nurse Practitioner

Pastoral Counseling

Appendix B

PANAS-X Adapted with Racial Affect Items

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you are feeling this way at the present moment. Use the following scale to record your answers:

very slightly or not at all extremely	a little	moderately	quite a bit
1	2	3	4
5			

Afraid
Amused
Angry
Angry at self
Annoyed at others
Ashamed
Blameworthy
Disgusted with self
Dissatisfied with self
Distressed
Embarrassed
frightened
Guilty
Hostile
Irritable
Nervous
Scornful
Surprised
Uncomfortable
Upset

Appendix C

Client Video Script:

For the past couple of months, I have not been doing okay. I can't sleep properly, I get maybe 4-5 hours at most, even on weekends. I have trouble falling asleep and wake up frequently when I do sleep. I can't remember when this started, nothing much has changed in my life recently. I find it hard to shut off my mind, and I am tired most of the day. I get distracted a lot and have a hard time focusing on what I am doing. During the day I'm so tired it's starting to affect my work. I have no energy or motivation for anything, and I feel like giving up. Sometimes I will just cry for no reason. Everyone says I am not like myself lately. I don't think they get it at all.

Appendix D

Clinical Judgment Questions

To what extent do you agree with the following diagnoses for the client in the video.
[Please click and drag the red slider to respond]

Strongly Disagree Disagree Agree Strongly Agree
1 2 3 4 5 6 7 8 9 10

Major Depressive Disorder

Generalized Anxiety Disorder

Please indicate the potential severity of each diagnosis:
[Please click and drag the red slider to respond]

Strongly Disagree Disagree Agree Strongly Agree
1 2 3 4 5 6 7 8 9 10

Major Depressive Disorder

Generalized Anxiety Disorder

Appendix E

The following text was associated with each feedback condition. Participants were randomly assigned to one of the three conditions.

Neutral feedback: Your results indicate no automatic preference for White or Black individuals

Negative feedback: Your results indicate an automatic preference for White individuals compared to Black individuals.

Positive Feedback: Your results indicate an automatic preference for Black individuals compared to White individuals.