

4-28-2020

## Racial/Ethnic Differences in Attitudinal Treatment Engagement Among Adolescents and Young Adults

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# Racial/Ethnic Differences in Attitudinal Treatment Engagement Among Adolescents and Young Adults

Linda A. Oshin, PhD

University of Connecticut, 2020

Low engagement in mental health treatment is a problem across racial/ethnic, socioeconomic, and gender lines. Disparities in treatment engagement are particularly evident among certain racial/ethnic groups and may result in part from different beliefs about mental health and psychotherapy (Yasui et al., 2017). Despite evidence of engagement disparities, there is limited research on the attitudes that youth of color have toward mental health treatment. The current studies investigate racial/ethnic differences in beliefs about treatment among adolescents and young adults. Study 1 was a retrospective cohort analysis examining self-reported readiness for psychotherapy among adolescents admitted to a psychiatric inpatient unit. Results demonstrated no global racial/ethnic differences in readiness for psychotherapy, but there was a significant race by gender interaction with Black males reporting higher disinterest in psychotherapy. Study 2 was an experimental study of university students investigating the influence of mental health clinic diversity, ethnic-racial identity, and discrimination on treatment attitudes. Results again indicated few group differences, except that Black participants had significantly more negative expectations about the therapy process. Clinician diversity was not related to treatment attitudes. Discrimination and ethnic-racial identity were significantly related to attitudes and the relationship between Public Regard and attitudes was moderated by race/ethnicity. Overall findings indicate many similarities across racial/ethnic groups, but also highlight the need to identify individual factors, such as ethnic-racial identity, that may contribute to negative attitudes toward treatment for some youth of color.

Racial/Ethnic Differences in Attitudinal Treatment Engagement Among Adolescents and Young  
Adults

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B.S. Columbia University, 2012

M.S. University of Connecticut, 2016

A Dissertation

Submitted in Partial Fulfillment of the

Requirements for the Degree of

Doctor of Philosophy

at the

University of Connecticut

2020

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APPROVAL PAGE

Doctor of Philosophy Dissertation

Racial/Ethnic Differences in Attitudinal Treatment Engagement Among Adolescents and Young  
Adults

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## Acknowledgements

Throughout my graduate school training, and in the completion of this project in particular, I am indebted to Dr. Stephanie Milan for her unwavering support and guidance. I truly appreciate her availability, patience, and expertise as I have grown over these past six years. I am also extremely grateful to my dissertation committee (Dr. Diane Quinn, Dr. Jeffrey Burke, Dr. Jennifer Wolff, and Dr. Amy Gorin) for their time on this project and mentorship during my time at UCONN. I am fortunate to have such a wonderful committee. This project would be nothing without the participation of several young people at Bradley Hospital and at UCONN.

Thank you to my lab mates, Sanne Wortel and Christina Carlone, who provided advice and support, as well as my cohort. I would also like to extend my deepest gratitude to several friends and family members for their encouragement and love throughout graduate school. I share my success with each person who held me up when I could not do it on my own. I am especially grateful to my parents, Carol and Jim Lindsay, who have always believed I could do whatever I put my mind to, and to Oluyemi and Vincent Oshin, for their constant prayers and encouragement. I must also thank my dear friends Nana Marfo, Andrea DePetris, and Jaleith Gary, for their constant friendship and support. Finally, there are no words to express my thanks to my husband, Segun Oshin, for your constant love, support, encouragement, and patience. You made this possible and I am so lucky to have you by my side.

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## Introduction

In the United States, people of color<sup>1</sup> are less likely to receive mental health services than White people (Garland et al., 2005; Institute of Medicine, 2003; Zimmerman, 2005). This disparity is particularly concerning given that people of color are at increased risk for developing mental disorders due to poverty, community trauma, and chronic experiences of discrimination (Alegria et al., 2010). Many of the hypothesized causes for this treatment disparity reflect pragmatic barriers (e.g. lack of adequate health insurance, long waiting lists, limited hours, and lack of multilingual clinicians) that disproportionately affect people of color and result in lower quality services (McKay & Bannon, 2004; Ofonedu et al., 2017; Snell-Johns et al., 2004). While addressing these pragmatic barriers is crucial, reducing disparities also requires a better understanding of psychological barriers to treatment, particularly those related to the early phases of treatment engagement (Yasui et al., 2017). The proposed studies examine racial/ethnic differences in measures of treatment engagement or intent to engage in treatment in two diverse samples and explore factors (e.g., diversity of mental health clinicians, ethnic-racial identity) that may impact treatment engagement among people of color.

## Background

Treatment engagement is a multidimensional and dynamic process that has been inconsistently operationalized across studies (Staudt, 2007; Yatchmenoff, 2005). In an effort to refine the concept, Staudt (2007) theorized that there are two components of treatment engagement: behavioral and attitudinal. The behavioral component of treatment engagement

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<sup>1</sup> Racial/ethnic labels have been historically fraught with problems. For the purposes of this paper, I will be referring to those who fall into the non-Hispanic category as “White” and all other racial/ethnic groups who do not fall into that category as “People of Color.”

refers to the tasks that are required to implement treatment and achieve positive mental health outcomes. Some behavioral indicators of engagement include session attendance, premature termination, and homework completion (Chavira et al., 2014; Ofonedu et al., 2017). The majority of studies on treatment engagement use behavioral indicators. The attitudinal component refers to a commitment to treatment that stems from a belief that treatment will lead to positive outcomes (Staudt, 2007). This component of engagement distinguishes between clients who are compliant (e.g., just showing up) and those who are fully participating in treatment (e.g., communicating with and trusting in the clinician). Attitudinal treatment engagement has been less studied than behavioral engagement as it requires direct measurement of attitudes (e.g., beliefs, expectations, intentions) using questionnaires or ratings of therapy sessions (Alegría et al., 2013; Chavira et al., 2014; Yatchmenoff, 2005). This neglect is unfortunate as these attitudes may drive behavioral engagement. Additionally, attitudinal treatment engagement may be more amenable to intervention efforts than behaviors as attitudes can be changed (e.g., Yasui et al., 2017).

Studying attitudinal aspects of engagement may be especially important during the initial phases of treatment, such as the decision to seek treatment or attitudes about initiating treatment. The majority of individuals with mental health needs do not seek therapy, do not attend their first appointment, or drop out of treatment within the first few sessions (Costello et al., 2003). These individuals may not have enough involvement with mental health services to actually have indicators of behavioral engagement (e.g., if they never contact a provider). Moreover, poor attitudinal engagement during the early phases of treatment may negatively affect these behaviors (e.g., a belief that therapy is not effective could lead to not contacting a provider or showing up for only one session).

### **Treatment Engagement Among People of Color**

Treatment engagement is concerningly low among people with mental illness across racial, ethnic, and economic groups (Costello et al., 2003). While limited treatment engagement is not unique to people of color, the historical, psychological, and familial factors specific to people of color that may impact engagement in mental health treatment. First, there is a long history of mistreatment or neglect of people of color by the health care system in the United States (Suite et al., 2007). As a result, many people of color may have distrust of the health system more broadly. Second, the mental health field is still predominantly comprised of White providers (American Psychological Association, 2018). Social psychology research on in-group/out-group bias indicates that people often have less trust of members of groups with which they do not identify (Kramer, 2017); thus, the lack of representation in the field could affect treatment attitudes. Indeed, clients of color rated therapists more positively when they were matched on race/ethnicity (Cabral & Smith, 2011).

For many people of color, racial/ethnic socialization may include messages that impact their beliefs and behaviors regarding mental health and mental health treatment. For example, African American youth often receive messages within their family on the need to be strong and independent in the face of adversity (Oshin & Milan, 2019). Similarly, Asian American parents may emphasize the importance of keeping problems within the family (Mokkarala, O'Brien, & Siegel, 2016). There has been a great deal of research on the impact of stigma associated with mental illness or psychological help-seeking. Research demonstrates that stigma has a negative impact on help-seeking for mental health and this effect is especially high among Asian Americans (Clement et al., 2015).

Consistent with cultural factors that discourage mental health treatment, there is empirical evidence of racial/ethnic differences in treatment engagement. According to studies that focus on behavioral indicators of treatment engagement, people of color consistently have worse engagement in comparison to White people (USDHHS, 2001). People of color have a lower overall treatment rate, are more likely to terminate treatment prematurely, and are less likely to pursue treatment after hospitalization (Maura & Weisman de Mamani, 2017; Wang et al., 2005). Kazdin and Mazurick (1994) found that families that dropped out of treatment earlier (6 or fewer sessions) were more likely to be families of color, suggesting that barriers to treatment engagement are more likely to impact the early phases of treatment. Importantly, studies focusing on specific racial/ethnic groups suggest consistent disparities. African Americans and Black Caribbeans with mental disorders are less likely to use mental health services or support of any kind, whether formal or informal, in comparison to White Americans (Woodward, 2011). Asian Americans are less likely to use mental health services in comparison to the general population, and the rate of use varies by nativity and generation status (Abe-Kim et al., 2007). Chavira et al. (2014) found that Latino clients did not differ in the amount of homework completed as part of therapy but attended less sessions than White clients. While there is very little research on treatment engagement among Native Americans, one large study of adolescents with suicide ideation found that Native Americans adolescents had the highest rate of suicide attempts but the lowest rate of treatment (Nestor et al., 2016).

One issue with focusing on behavioral indicators of engagement, as is the case with most studies on engagement, is that they emphasize client behavior, even though clinicians and institutions have a large role to play in treatment engagement (Staudt, 2007). Additionally, some studies of attitudinal engagement focus on psychological factors among clients (e.g., help-

seeking beliefs or stigma) without considering clinician behaviors or institutional barriers that impact an individual's desire to seek help for mental illness. In contrast, measures that incorporate the individual's views of the therapist, therapeutic relationship, or agency can provide a more contextualized understanding of attitudinal engagement that is not solely about individual characteristics.

Studies examining attitudinal engagement among people of color have focused on subdimensions, such as mistrust toward mental health, belief in treatment efficacy, or amount of communication or alliance in a session. For example, a study of African American and mixed-race patients who were admitted to psychiatric inpatient units found that these groups reported more mistrust of mental health services and staff than patients of other racial/ethnic groups (Henderson et al., 2015). African American veterans reported lower working alliance with their mental health providers than White veterans (Eliacin et al., 2018). While Latino participants in a trial for CBT did not differ in many indicators of engagement (commitment to treatment, completion of homework, etc.) in comparison to White participants, they were rated as having less understanding of CBT principles and attended fewer sessions (Chavira et al., 2014), demonstrating the importance of examining indicators of both behavioral and attitudinal components of treatment engagement. Together, these studies suggest that clients of color may differ in attitudinal engagement; however, there are relatively few studies in this area and measures of attitudinal engagement have varied.

**Treatment Engagement Among Adolescents of Color.** While many studies of treatment engagement have focused on adults, there may be special considerations for treatment engagement depending on age. Treatment for adolescents requires the involvement of multiple people, resulting in more people who must be engaged in treatment. Parents may not feel as

engaged in treatment as the adolescent (or vice versa) or may encounter different practical barriers to being involved in their adolescent's treatment (Gopalan et al., 2010; McKay & Bannon, 2004). Adolescents may be hesitant to engage in treatment due to fears of stigma from peers, a desire to maintain independence, lack of knowledge about mental health, or difficulty distinguishing mental health symptoms from the normative stresses and changes of adolescence (Cauce et al., 2002; Gopalan et al., 2010). Addressing treatment engagement during adolescence is especially crucial, as mental health problems tend to develop during this age range and during young adulthood (Merikangas et al., 2010).

There is consistent evidence of lower treatment engagement in adolescents of color compared to White adolescents (Cummings et al., 2014; Garland et al., 2005; Miller et al., 2008; Nestor et al., 2016). Youth of color attend fewer therapy sessions than White youth and are less likely to use formal mental health services (Garland et al., 2005; Miller et al., 2008). Families in urban settings, which are majority families of color, frequently do not attend their first appointment after an initial evaluation, and in some cases the average length of treatment is as low as three sessions (McKay & Bannon, 2004).

As with the adult literature, studies of adolescent treatment engagement focus on behavioral indicators of engagement without investigating attitudinal engagement. Given that adolescents are still minors and may be in treatment against their will, attitudinal engagement may be particularly important in this developmental period. This may be particularly true for adolescents of color, who are more likely to be referred to a mental health clinic by their school or an external agency, rather than being family-referred (Cummings et al., 2014; Takeuchi et al., 1993). These findings suggest that children of color are more likely to receive treatment when their symptoms are causing impairment in schools or other institutions, rather than when their

symptoms are subjectively distressing to the child or parent. Even when adolescents are not required to go to treatment, they may feel it is coerced (e.g. in exchange for regaining privileges, satisfying caregivers, etc.). Bath et al. (2019) found that adolescents who were presenting for substance use treatment experienced varying levels of perceived social coercion outside of legal mandate for treatment, suggesting that it is important to understand the reasons behind adolescents' motivations for treatment.

Attitudinal engagement may be particularly relevant in circumstances when treatment is non-voluntary in some nature, such as inpatient hospitalization or treatment for legal reasons. In these settings, a certain level of behavioral engagement may be mandated or regulated (e.g., number of sessions mandated by judge, patient must meet with psychiatrist in order to discharge); as a result, behavioral indicators may be a less accurate reflection of engagement relative to attitudinal measures. Youth of color are more likely to receive non-voluntary treatment, such as being mandated or referred for treatment through a social/legal agency or school (Takeuchi et al., 1993). Non-voluntary treatment has been hypothesized to contribute to ongoing disparities in treatment engagement as these services often do not provide the same standard of care as voluntary services and patients of color who have been involuntarily admitted are less trusting of their providers (Garland et al., 2005; Henderson et al., 2015; Maura & Weisman de Mamani, 2017). Many studies of treatment engagement focus on outpatient settings with fewer studies focusing on higher levels of care. While psychiatric inpatient units do not struggle with behavioral engagement (quite the opposite, as they often do not have enough beds to accommodate the need), attitudinal engagement may be extremely important for mental health outcomes on an inpatient unit.

### **Barriers to Engagement for People of Color**

Yasui et al. (2017) note that prevailing models of treatment engagement rely on process models of engagement that tend to focus on engagement once an individual or family has already come in contact with a provider or clinic. By focusing on engagement during the early phases of treatment (e.g., number of sessions, therapy alliance), these models make assumptions about individuals that may not apply to people of color. For example, a popular model of treatment engagement highlights three processes that constitute early engagement: 1) recognition of a problem, 2) connection of an individual or family to a mental health resource, and 3) the individual/family seeing the mental health provider (Mckay and Bannon, 2004). This model assumes that individuals share the same concept of mental illness that exists in mainstream culture, that an individual experiencing mental illness symptoms will identify those experiences as an issue of mental health (as opposed to a normal reaction to difficult circumstances or an issue of religion/spirituality), and that one would consider seeking help from a mental health professional rather than an informal service.

The Culturally Infused Engagement model (CIE; Yasui et al., 2017) considers additional barriers to engagement that might exist due to cultural differences. It places the stages of engagement from previous research within the context of multilevel ecological systems, from the conceptualization of distress, to help-seeking/healing approaches, to intent to seek help, to engagement behaviors. For example, some individuals from refugee communities may avoid seeking treatment, despite understanding the need, because of fear of bringing shame on the family (Scuglik et al., 2007). Cultural differences and histories of oppression can affect engagement at several individual levels, as well as larger systematic/institutional levels. Many studies on treatment engagement among people of color point to barriers in access to mental

health services, such as long waiting lists or lack of quality mental health facilities in low-income and diverse areas (Lindsey et al., 2014; McKay & Bannon, 2004; Ofonedu et al., 2017). These barriers are associated with socioeconomic disadvantage that disproportionately affect people of color. Additionally, there are factors related to cultural differences and individual experiences related to race/ethnicity that may also act as barriers to treatment engagement. These barriers include both institutional or therapist characteristics and client characteristics.

**Institutional and Therapist Characteristics.** Some studies have reported that increased treatment engagement among people of color result from changes in clinic characteristics, such as employing community members as paraprofessional staff (Gopalan et al., 2010; Interian et al., 2013). These findings suggest there may be characteristics of settings that impact engagement for people of color. One potentially important institutional characteristic is the diversity of providers who are available for services. While racial/ethnic matching of therapist and clients does not result in better mental health outcomes, a meta-analysis found that clients of color tend to prefer and have more positive perceptions of therapists from a similar racial/ethnic background (Cabral & Smith, 2011). A study of Latino patients found that patient-clinician dyads that were ethnically matched exhibited more patient-centered communication, patients were more verbally dominant, and patients reported a greater working alliance with their clinician than dyads that were mismatched (Alegría et al., 2013). Racial/ethnic matching may not have an impact on mental illness symptom reduction but may influence attitudes and beliefs about treatment that are central to engagement, especially during the early stages of treatment. Attributions about characteristics such as similarity and trustworthiness in other people differ based on whether those people are members of one's in-group (Kramer, 2017). Because of this information processing tendency, people of color may make assumptions about the potential for mental health providers to

understand or help them prior to establishing a therapeutic relationship if those providers are perceived as racially or ethnically different from them. While college students are often assigned a clinician and do not get to pick a clinician based on race/ethnicity, research shows that students of color are more likely to attend student mental health centers that have greater clinician diversity (Foo Kune et al., 2019). Thus, the contribution of clinician diversity, rather than ethnic matching, to early engagement may be important to investigate. Plausibly, perceived clinician diversity may be one situational cue that students of color use in determining the potential for social identity threat within a particular setting or organization (Murphy and Taylor, 2012).

**Individual Characteristics of People of Color.** While research has shown consistent racial/ethnic disparities in treatment engagement, some studies suggest that there may be individual differences in client characteristics that influence engagement. Many studies point to racial/ethnic discrimination as a detriment to treatment engagement among people of color. Experiences of discrimination in a health care setting is related to more unmet health care needs and worse mental health (Benjamins & Whitman, 2014). Black and Latinx patients are more likely to attribute any discrimination they experience in a health care setting to be due to their race/ethnicity, as opposed to lack of insurance or income, thereby impacting premature termination and feeling that treatment is less helpful (Mays et al., 2017). Black and mixed-race patients are more likely to express mistrust for psychiatric inpatient hospitals if they had experienced unfair treatment in any health care setting (Henderson et al., 2015). Mistrust of a mental health setting may result from experiences with discrimination and be a significant barrier to treatment among people of color. A meta-analysis found a moderate effect size,  $r = .3$ , for cultural mistrust among African Americans toward mental health services (Whaley, 2001). Interestingly, the effect size for cultural mistrust was not significantly different for mental health

than it was for other domains, suggesting that mental health is affected by the broader cultural context and therapists should not assume that they are viewed differently by African American clients due to their role or positive intentions. These studies suggest that discrimination may be a barrier to engagement for some people of color.

One way that discrimination in a health or mental health care setting is expressed is through communicating to the client that their treatment in that setting or a related setting may be contingent on their racial/ethnic identity. In other words, clients of color may be looking for cues in the mental health setting that they may encounter discrimination, and the degree to which they detect these cues may affect their engagement in treatment (Steele et al., 2002). Purdie-Vaughns, Steele, Davies, Dittmann, and Crosby (2008) found that African American professionals were more likely to distrust a workplace if there was low minority representation and cues that cultural differences were not valued (i.e. colorblindness diversity ideology). Cues that one's social identity may be under threat can be as explicit as a statement that certain social groups are inferior, or as subtle as the absence of people with a similar social identity (Steele et al., 2002).

The extent to which one orients to cues that one's social identity is under threat may vary by individual characteristics. For example, Black women who were high in ethnic-racial identity (ERI) experienced more anxiety than White women or Black women with low ERI in a virtual health care situation when there were salient cues about stereotypes (Abdou & Fingerhut, 2014). ERI is a multidimensional construct, with dimensions like exploration, affirmation, and centrality (Umaña-Taylor et al., 2014). One important dimension of ERI is public regard, or the extent to which one believes others view their racial/ethnic group positively or negatively (Sellers et al., 1998). The extent to which one is vigilant to cues of identity threat may vary according to public regard (Steele et al., 2002). While public regard has been shown to have an effect in how

vulnerable individuals are to stereotype threat (Ho & Sidanius, 2010), public regard has not been investigated in its effect on perceived threat in interpersonal or therapeutic relationships. Public regard may influence the attitudes and beliefs people of color have about treatment and could interact with institutional characteristics (e.g., clinician diversity) to influence treatment engagement.

As highlighted, attitudinal engagement may vary by institutional differences and within-group factors related to race/ethnicity. However, most existing research on racial/ethnic differences in treatment engagement focus on main effects and have not studied characteristics associated with within-group variability. Examining attitudinal engagement in diverse samples allows for better understanding of how individual differences (e.g., ethnic-racial identity) can interact with institutional barriers or clinic attributes (e.g., clinician diversity) to influence treatment engagement.

### **The Current Studies**

As reviewed above, much of the literature on treatment engagement among people of color has focused on behavioral measures of engagement more than underlying attitudes or beliefs that may contribute to disparities in engagement. This is particularly true in literature on treatment engagement among adolescents (Garland et al., 2005; Miller et al., 2008). The goal of this dissertation is to examine attitudinal treatment engagement among young adults and adolescents of color through two studies.

Study 1 is a retrospective cohort study involving secondary data analysis from intake information collected from all adolescents admitted to a psychiatric facility over a one-year period. The specific research question for this study is: Are there racial/ethnic differences in attitudes toward therapy at intake among adolescents in a psychiatric inpatient unit? I

hypothesized that adolescents of color would report more negative attitudes toward therapy in comparison to White adolescents.

Study 2 is an experimental study including university students from four racial/ethnic groups (Black, Asian, Hispanic, and White). The specific research questions to be addressed in Study 2 are: 1) Are there racial/ethnic differences in readiness to engage with and positive expectations toward a hypothetical student mental health service; 2) Do institutional characteristics, specifically clinician diversity as experimentally manipulated, differentially affect engagement intention and expectations more among participants of color vs. White participants; 3) Do individual differences (i.e. ERI and discrimination) influence attitudes toward and intent to engage in treatment; 4) Do institutional characteristics interact with individual characteristics to predict engagement attitudes and intention?

My hypotheses for Study 2 were: 1) Participants of color will report less willingness to engage with and positive attitudes toward a hypothetical student mental health service in comparison to White participants. 2) Participants of color who view a website that does not indicate diverse clinicians will express more negative attitudes toward engaging in treatment relative to those who view a website with diversity; 3) Participants of color with more negative ERI (i.e. low MEIM and low public regard) and high discrimination will have less desire to engage and more negative attitudes toward treatment; 4) Participants of color who report more negative ERI and high discrimination will report less desire to engage and more negative attitudes about treatment when viewing a website without diverse clinicians in comparison to participants of color with more negative ERI and perceived discrimination.

Broadly, these studies will add to the literature on mental health treatment disparities by documenting potential racial/ethnic group differences in indicators of early attitudinal

engagement in two settings, and by identifying characteristics of institutions and individuals that may influence attitudinal engagement among youth of color.

## Study 1 Methods

### Participants

The potential sample included  $n = 387$  adolescents from the Adolescent Inpatient Unit at Bradley Hospital who identified their race or ethnicity. All adolescents who entered the hospital between October 2017 and October 2018 were eligible for participation. Adolescents who identified as Asian ( $n = 7$ ) and Native Hawaiian ( $n = 1$ ) were excluded from analyses due to low group numbers, leaving only White ( $n = 254$ ), Hispanic/Latinx ( $n = 83$ ), and Black ( $n = 42$ ) participants. After excluding Asian and Native Hawaiian adolescents, the sample used for analyses included  $n = 379$ . Because the analysis compared race/ethnicity groups to each other, adolescents who indicated that their ethnicity was Hispanic/Latinx were included in the Hispanic/Latinx group, regardless of their racial identity. A majority of the adolescents in this group identified their race as other ( $n = 52$ ), but some identified as Black ( $n = 10$ ) or White ( $n = 20$ ). The sample included more females ( $n = 259$ ) than males ( $n = 142$ ). Average age was  $M = 14.89$  (range = 12-18;  $SD = 1.58$ ). Average number of previous hospitalizations was  $M = 1.4$  ( $SD = 2.79$ ,  $Median = 0$ ) and 59.1% of the sample completed their intake assessment during their first hospitalization. The average length of stay was  $M = 12.77$  days ( $SD = 16.7$ ,  $Median = 8$ ).

### Procedures

All patients who were admitted to the inpatient unit were asked to complete self-report questionnaires on a tablet and received a structured diagnostic interview administered by a clinician within 72 hours of hospital admission. As this was a quality improvement study,

informed consent was not required. Some demographic information for patients was obtained from the electronic medical record. The current study is a secondary data analysis.

### Measures

**Demographics.** Participants self-reported demographic information, including age, gender, and race/ethnicity. Additionally, number of previous hospitalizations and length of stay were obtained from the medical record.

**Therapy Readiness.** The Readiness for Psychotherapy Index (RPI; Ogrodniczuk, Joyce, & Piper, 2009) examined participants' attitudes and affect around receiving treatment at the hospital. The RPI contains 20 items that are rated on a 5-point Likert scale from strongly disagree (1) to strongly agree (5). The measure contains four subscales: *Disinterest* (Ex. "I don't have much desire to work hard in therapy."),  $\alpha = .68$ ; *Perseverance* (Ex. "I can endure discomfort in therapy because I know it will help me in the long run."),  $\alpha = .84$ ; *Openness* (Ex. "I will be able to talk freely about my problems with the therapist."),  $\alpha = .76$ ; and *Distress* (Ex. "My problems make me very unhappy."),  $\alpha = .81$ . One of the items in the disinterest scale, "My problems will eventually go away on their own," was determined to contribute to the low internal consistency. Analyses with this subscale were run with and without this item. The total RPI scale was calculated by adding the Perseverance, Distress, and Openness subscales, then subtracting Disinterest.

**Psychiatric Diagnosis.** The Children's Interview for Psychiatric Syndromes (ChIPS; Weller, Weller, Fristad, Rooney, & Schecter, 2000) is a clinician-administered structured interview that assesses symptoms for major psychiatric disorders that have been experienced in the past six months (e.g. Attention Deficit Hyperactivity Disorder, Major Depressive Disorder, Psychosis, Post-Traumatic Stress Disorder). Diagnostic criteria are based on the DSM-IV-TR.

The current study examined diagnosis as a dichotomous variable (yes/no) that indicated whether or not the participant met diagnostic criteria for the disorder.

**Data Analyses.** All measures were tested for skew and kurtosis. Correlations, t-tests, and ANOVAs were used to determine if demographic variables should be used as control or predictor variables. In order to reduce the number of analyses, psychiatric diagnoses were grouped according to previous analyses using these data (Wolff et al., 2018). The following categories of disorders were used: Mood, Anxiety, Trauma, Eating, Disruptive, ADHD, and Psychosis. Each category of disorder remained a dichotomous variable that indicated whether a participant met a diagnosis that fell within that category or not. Comparisons of therapy readiness by race/ethnicity and other demographic variables were examined using ANOVAs and MANOVAs. When control variables were introduced, comparisons were made using ANCOVAs and MANCOVAs. The data were analyzed using SPSS 26.

**Power analysis.** A power analysis was conducted in G\*power. using the main analysis was an ANOVA testing for race/ethnicity differences in total RPI. Using three groups, the analyses had sufficient power  $(1 - \beta) = .80$  to detect a small effect of  $f = .05$  with  $n = 42$ . However, the varying subgroup sizes (i.e. Black  $n = 42$  vs White  $n = 254$ ) resulted in diminished power for some post-hoc group comparisons.

## Study 1 Results

### Preliminary Analyses

Preliminary analyses were conducted to examine associations between RPI scores and various demographic and diagnostic factors. There was no significant difference in total RPI by

gender,  $t(230.74) = .67, p = .49$ ,<sup>2</sup> but there were significant differences in the RPI subscales. As seen in Table 1, males endorsed higher scores on the Disinterest and Openness subscales while females endorsed higher scores on the Distress subscale than males. Age was positively correlated with the total RPI,  $r = .13, p = .01$ ; Perseverance,  $r = .14, p = .007$ ; and Openness,  $r = .12, p = .02$ .

Differences by diagnosis in the RPI and its subscales were examined using t-tests. Table 2 demonstrates that those who were diagnosed with Mood or Anxiety disorders were significantly higher in total RPI than those who were not and those diagnosed with a Disruptive disorder were significantly lower in total RPI. Differences by diagnosis in the subscales of the RPI were also examined (Tables 3-6). Those with Mood or Anxiety disorders were significantly lower in Disinterest. Patients with Disruptive disorders were significantly lower in Perseverance. Individuals with Mood, Trauma, Disruptive, and Psychotic disorders were associated with lower Openness. Finally, Mood, Anxiety, Trauma, and Eating disorders were associated with higher Distress.

Number of diagnoses was not significantly correlated with total RPI,  $r = .08, p = .17$ , but there were some significant correlations with the subscales of the RPI. Number of diagnoses were positively correlated with Distress,  $r = .38, p < .001$ , and was negatively correlated with Disinterest,  $r = -.11, p = .04$ , and Openness,  $r = -.24, p < .001$ . The correlation between Disinterest and number of diagnoses was no longer significant when a question that contributed to low internal consistency was removed. There was no significant correlation between number of diagnoses and Perseverance,  $r = -.03, p = .58$ . There were no significant correlations between number of past hospitalizations and the RPI or any of its subscales.

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<sup>2</sup> In cases where there was a significant difference in the variance between groups, the Welch-Satterthwaite adjustment for degrees of freedom was used.

A series of chi-square analyses were conducted to investigate racial/ethnic differences within each diagnosis. Table 7 shows racial/ethnic differences in Mood disorder diagnosis, with the rate lower among Black adolescents than other racial/ethnic groups. All other diagnoses did not have differ by race/ethnicity. In order to conduct a chi-square test of differences in number of diagnoses by race/ethnicity, individuals with greater than 4 diagnoses were condensed into a group. The analysis indicated that there no significant difference in number of diagnoses by race/ethnicity,  $\chi^2(10) = 10.34, p = .41$ . Race/ethnicity was not associated with number of past hospitalizations,  $F(2,336) = .58, p = .56$ , or age,  $F(2,376) = .34, p = .71$ . Mood disorder diagnosis was used as a control variable in further analyses.

### **Differences in Therapy Readiness by Race/Ethnicity and Gender**

Mean scores across race/ethnicity for the RPI are presented in Table 8. Race/ethnic group differences on the total RPI were tested using ANOVA for total RPI and MANOVA for the subscales. The relationship between race/ethnicity and RPI was approaching significance,  $F(2,365) = 2.78, p = .06$ . The MANOVA for RPI subscales was significant,  $F(8, 724) = 2.18, \text{Wilks' } \Lambda = .95, p = .03$ . The only significant difference by race/ethnicity was in the Distress scale, suggesting that the marginally significant difference by race/ethnicity in the total RPI was likely driven by the significant difference in Distress by race/ethnicity. Post-hoc LSD comparisons demonstrated that Black patients reported less Distress,  $M = 16.49, SD = 5.08$ , than White patients,  $M = 18.68, SD = 18.68, p = .004$ . There was no significant difference in the other subscales by race/ethnicity.

The relationship between race/ethnicity and the RPI controlling for Mood disorder diagnosis was tested using an ANCOVA and was not significant,  $F(2,364) = 1.50, p = .23$ . In MANCOVA, there were no group differences in RPI subscales after controlling for Mood

disorder. Thus, once controlling for Mood diagnosis as a potential confound, there were no main effects of race/ethnicity on total RPI scores or on any subscales.

Due to the significant differences in the RPI by gender, gender was included to test for interactions between gender and race/ethnicity again. There was no significant interaction between race and gender for the RPI (Table 9). The MANOVA for the RPI subscales was not significant  $F(8, 718) = 1.58$ , Wilks'  $\Lambda = .95$ ,  $p = .13$ . While the omnibus multivariate test was not significant, due to the exploratory and descriptive nature of the analyses, the differences by subscale were still examined. There was a significant interaction between gender and race on the Disinterest subscale,  $F(2, 362) = 4.34$ ,  $p = .01$ , partial  $\eta^2 = .02$ . Post-hoc t-tests indicated that Black males,  $M = 16.93$ ,  $SD = 2.95$ , had significantly higher Disinterest scores in comparison to White males,  $M = 12.79$ ,  $SD = 4.78$ ;  $t(94) = 3.13$ ,  $p = .002$ ,  $d = 1.04$ , and Hispanic/Latinx males,  $M = 13.21$ ,  $SD = 4.37$ ;  $t(46) = 2.91$ ,  $p = .005$ ,  $d = 1.00$ . In contrast, there were no racial/ethnic differences in females. Within each racial/ethnic group, the males had higher Disinterest scores in comparison to females. These results are presented in Figure 1. As can be seen, males had higher scores on Disinterest in comparison to females within each race/ethnicity group, although this effect was most pronounced among Black patients due to the high Disinterest scores among Black males.

The above analyses were repeated controlling for Mood disorders. As with the previous analysis, there was no difference in full-scale RPI,  $F(2, 361) = .79$ ,  $p = .46$ . The MANCOVA for the RPI subscales was not significant,  $F(8, 716) = 1.62$ , Wilks'  $\Lambda = .97$ ,  $p = .12$ . There was a significant interaction for the Disinterest subscale,  $F(2, 361) = 3.30$ ,  $p = .04$ , partial  $\eta^2 = .02$ , again driven by the high scores among Black males. As noted earlier, a shortened version of the Disinterest subscale was also analyzed due to poor internal consistency in the full Disinterest

subscale. When using the shortened version of the Disinterest subscale and controlling for Mood disorder diagnosis, results were similar to analyses with the full Disinterest subscale. In other words, the heightened disinterest among Black males was not due solely to the lower frequency of Mood disorders in this group or to potential psychometric issues in the full subscale.

In sum, the results from Study 1 generally indicate no significant differences in RPI or the RPI subscales by racial/ethnic group. There was a significant interaction between race/ethnicity and gender, such that the tendency for males to report more Disinterest than females was more pronounced among Black compared to White and Latinx adolescents, and this relationship persisted with controlling for Mood disorders and testing with a shortened version of the Disinterest subscale. Additionally, Black males reported more Disinterest than White and Hispanic/Latinx males, although the difference between Black and Hispanic/Latinx males lost significance after controlling for Mood disorders.

## **Study 2 Methods**

### **Participants**

The participants in this study ( $n = 250$ ) were recruited from the University of Connecticut. Most participants were drawn from the Department of Psychological Sciences participant pool ( $n = 245$ ), although a few ( $n = 5$ ) were recruited via advertisements to student groups. Participants from the participant pool received two course credits for their participation, while those who were recruited from student groups were entered into a raffle for a \$100 gift card.

Participants of color were oversampled in order to have enough participants for analysis comparing different racial/ethnic groups. The initial goal was to obtain a sample of  $n = 60$  for each of three racial/ethnic groups, and  $n = 120$  for the White group. The final  $n$  for each group

was: White  $n = 113$ , Asian  $n = 53$ , Hispanic/Latinx  $n = 57$ , Black  $n = 27$ . Average age was  $M = 19$  ( $SD = 1.15$ ,  $Range = 17 - 25$ ) and the sample was majority female, female  $n = 182$ , male  $n = 68$ . In terms of college year, 42% were freshmen, 34% sophomores, 16% juniors, 6% seniors, and 2% were fifth year or transfer students. Some of the participants (20%) reported that they were not born in the United States, and many participants (54%) reported that at least one of their parents were not born in the United States. First time college students constituted 14% of the sample.

### **Procedures**

The current study was presented as a survey regarding student's opinions regarding various student services and was conducted online. Participants were initially asked about their previous experience with and willingness to engage in various university services, including career counseling, physical health, mental health, police/security, and academic support. Participants were then told that they were to evaluate a randomly selected website for one of the services they rated previously (career counseling, mental health, etc.). In actuality, participants were randomly assigned to different versions of a website for a mental health clinic. Participants were assigned to one of two conditions that varied according to the diversity in the pictures of the clinicians that were displayed on the website: diverse or not diverse. In order to account for any variation in responses that were due to the unique sets of pictures that were displayed, each condition had two versions of the pictures of clinicians. In other words, the diverse condition had two sets of pictures and the not diverse condition also had two sets of pictures. Participants were told to, "Imagine you are having an extremely difficult semester and you came across this website. Please look carefully at the website and consider how comfortable you would feel using the services offered." They were required to look at the website for a minimum of 45 seconds

and maximum of 2 minutes. After viewing the website, participants answered a series of questions regarding their perceptions of the mental health clinic that was displayed on the website as well as other questions about their individual attitudes. All procedures were approved by the Institutional Review Board at the University of Connecticut.

## Measures

**Demographic information.** Participants were asked to provide detailed information about their racial/ethnic background, their and their family's immigration history, gender identity, whether they were a first-generation college student, and history of mental illness or treatment.

**Willingness to Engage in Student Services.** Participants were asked if there had been a situation since starting college when they thought various student services (career counseling, physical health, mental health, police/security, and academic support) would have been useful or relevant. Participants were then asked to rate whether they have *actually used* those services. Finally, participants were asked to read a series of scenarios in which each of the services would be useful, imagine they were in this situation, then rate each scenario on how comfortable they be with using the service and how likely they would be to use the service on a Likert scale from 1 (very uncomfortable/very unlikely) to 7 (very comfortable/very likely).

**Website Evaluation.** To maintain the perception that the study is about evaluating the website, participants were asked to rate various aspects of the website. For example, "How certain do you feel that this website has sufficient information to answer any questions you may have about the services offered?" "How visually appealing was the design of the website?" "How much did the pictures add to the overall appeal of the website?"

**Therapy Expectations.** The Milwaukee Psychotherapy Expectations Questionnaire (MPEQ; Norberg, Wetterneck, Sass, & Kanter, 2011) was used as one of the two indicators of attitudinal engagement. This measure assesses individuals' expectations about coming to therapy. The measure consists of 13 items that are rated on a 10-point Likert scale from 1 (not at all) to 10 (very much so). The measure contains two subscales. The *process* subscale (9 items) measures expectations about the therapeutic relationship, change during therapy, treatment structure, etc. ("I will feel comfortable with my therapist"). The *outcome* subscale (4 items) measures expectations about the consequences of engaging in therapy ("I anticipate being a better person as a result of therapy"). A total therapy expectations score was created by summing all items,  $\alpha = .94$ .

**Therapy Readiness.** Two subscales of the Readiness for Psychotherapy Index (RPI; Ogrodniczuk, Joyce, & Piper, 2009) were used to assess aspects of attitudinal engagement. Both subscales consist of five items each. The *openness* subscale consists of items assessing one's comfort with discussing and being vulnerable with a therapist ("I will have no trouble being completely honest and open in therapy.") and the *perseverance* subscale consists of items assessing one's willingness to maintain effort in therapy ("Even if therapy makes me uncomfortable, I will continue with it."). All items were rated on a 5-point Likert scale from strongly disagree (1) to strongly agree (5),  $\alpha = .79$ . This measure was modified to ask for anticipation of a relationship with a clinician with website the participant viewed. For example, the first example item said, "I would have no trouble being completely honest and open in therapy."

**Ethnic-Racial Identity.** Participants' ethnic-racial identity (ERI) was measured using the Multigroup Ethnic Identity Measure-Revised (MEIM-R; Phinney & Ong, 2007). The MEIM-R is

a well-validated measure across several racial/ethnic groups. This measure consists of 6 items. Participants will respond on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The measure contains two subscales, *exploration* or seeking information or experiences related to one's group ("I have often talked to other people in order to learn more about my ethnic group"), and *commitment* or the sense of belonging that one feels with their group ("I have a strong sense of belonging to my own ethnic group"). The measure demonstrated good internal consistency  $\alpha = .93$ .

**Public Regard.** Participants were asked to complete the public regard subscale of the Multidimensional Inventory of Black Identity (Sellers et al., 1997) as measure of another dimension of ERI. Past studies have shown that the scale can be used with participants of other races/ethnicities by changing the phrase *Black people* to *my ethnic group* (Johnson et al., 2005). This measure consists of 6 items, such as "In general, others respect my ethnic group," and "My ethnic group is not respected by the broader society," that were rated on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The measure demonstrated good internal consistency  $\alpha = .86$ .

**Experiences with Discrimination.** Participants were asked about their experiences with and stress attributed to discrimination using the General Ethnic Discrimination Scale (GEDS; Landrine, Klonoff, Corral, Fernandez, & Roesch, 2006). The GEDS asks about experiences with discrimination in specific domains of life (e.g., teachers, supervisors, neighbors, etc.) within the past year and during one's lifetime. The GEDS also assesses stress that is attributed to these experiences. Importantly, one of the items on the GEDS assesses experiences of discrimination by "people in helping jobs (by doctors, nurses, psychiatrists, case workers, dentists, school counselors, therapists, social workers and others)." The measure contains 18 questions, each

requires three responses (if experienced in the past year, in one's lifetime, and the stress these experiences cause) except the final question (How different would your life be now if you had not been treated in a racist and unfair way?), which has two responses (in the past year and in one's lifetime). All items are rated on a 6-point Likert scale from 1 (Never/Not at all stressful) to 6 (Almost all the time/Extremely stressful) and demonstrated good internal consistency  $\alpha = .98$ .

**Emotional Distress.** General emotional distress was measured for each participant using the Brief Symptom Inventory (BSI-S; Derogatis, 1993), which screens for psychological symptoms in three domains: Anxiety, Depression, and Hostility. The BSI-S contains 18 items that are rated on a scale from 1 (not at all) to 5 (extremely), indicating how much the participant felt bothered by the problem in the past seven days. The measure demonstrated good internal consistency  $\alpha = .94$ .

**Data Analysis.** All measures were tested for skew and kurtosis. Correlations and t-tests were used to determine if demographic variables should be used as control or predictor variables. ANCOVAs and MANCOVAs were used to examine differences in attitudinal engagement by race/ethnicity while controlling for demographic variables. These tests were conducted with the full-scale measure and with each subtest, as racial/ethnic differences in one subtest may be obscured in the full-scale and there are subtest differences in associations to behavioral engagement (Norberg et al., 2011; Ogrodniczuk et al., 2009). In order to test if race/ethnic group moderated the relationship between individual level racial/ethnic factors and attitudinal engagement, nested multigroup path analyses were run in AMOS Version 26. An omnibus test was conducted for each analysis in which a model with all paths freely estimated across racial/ethnic group was compared to a model with all paths constrained to be equal. If the fit was significantly improved by allowing paths to be freely estimated, then significant differences in

the path between the individual level racial/ethnic factors and attitudinal engagement were tested using critical ratios.

**Power.** A power analysis was conducted using G\*Power. The main analysis of therapy readiness predicted by website picture condition and race/ethnicity was used in this power analysis. With a numerator  $df = 2$  and six groups, the analysis suggested that a sample size of  $n = 158$  would be required to obtain sufficient power to find a medium effect size  $f = .25$ .

## Study 2 Results

### Preliminary Analyses

Preliminary analyses were conducted to examine whether therapy attitude variables should be considered separately or as a composite. As demonstrated in Table 10, the two measures of attitudinal engagement and their subscales were moderately correlated ( $r = .40-.58$ ), thus these two measures were considered separately. As the subscales within each measure of attitudinal engagement were highly correlated with each other (i.e. MPEQ Process highly correlated with MPEQ Outcome and RPI Openness highly correlated with RPI Perseverance) analyses were conducted with each subscale separately, then with a composite score for each measure. The subscales of the BSI were strongly correlated ( $r = .68 - .75$ ), so they were averaged into a composite score for emotional distress, similar to common uses of this measure. Recent, lifetime, and appraisal of discrimination were all highly correlated with each other ( $r = .80 - .93$ ) and were also averaged together for a composite discrimination score. As each subscale had the same number of items and no items were shared between subscales, a simple average was used for the composite.

As there were two different versions of the pictures used within each condition, t-tests were conducted to demonstrate that the responses from participants who viewed version 1 versus

version 2 of the diverse and non-diverse website could be combined. There were no significant differences between the two versions in each condition and thus, both versions of the website in each condition were combined to form two conditions: diverse and not-diverse.

Preliminary analyses for the MPEQ and the RPI tested if demographic variables needed to be covariates in subsequent analyses (Table 11). None of the categorical demographic variables were associated with treatment engagement. A series of correlations were conducted to demonstrate any relationships between age and MPEQ or RPI. Age was negatively correlated with the MPEQ,  $r = -.14$ ,  $p = .03$ , but not significantly related to the RPI. There were no significant differences in age by race,  $F(3, 246) = .99$ ,  $p = .40$ , or condition,  $t(248) = -.37$ ,  $p = .71$ .

A series of t-tests were conducted to test for demographic group differences in ERI and discrimination (Table 12). The MEIM was higher among participants who were not born in the U.S.,  $M = 5.37$ ,  $SD = 1.25$ , in comparison to those who were,  $M = 4.60$ ,  $SD = 1.56$ . This was the case for both subscales of the MEIM as well. Similarly, MEIM scores were higher among participants who had at least one parent born outside of the U.S.,  $M = 5.30$ ,  $SD = 1.40$ , in comparison to those with parents who were both born in the U.S.,  $M = 4.12$ ,  $SD = 1.43$ , as was the case for the MEIM subscales. Public Regard was higher among participants with parents who were both born in the U.S.,  $M = 30.91$ ,  $SD = 7.03$ , than those who had at least one parent who was born outside of the U.S.,  $M = 25.77$ ,  $SD = 7.92$ . Participants who were first generation college students reported lower Public Regard,  $M = 23.60$ ,  $SD = 9.34$ , than those who had a family member who attended college,  $M = 28.86$ ,  $SD = 7.45$ . Discrimination was higher among participants who were not born in the U.S.,  $M = 2.22$ ,  $SD = .80$ , in comparison to those who were born in the U.S.,  $M = 1.64$ ,  $SD = .81$ . Similarly, participants with at least one parent who was

born outside of the U.S. reported higher discrimination,  $M = 2.05$ ,  $SD = .86$ , than those with both parents who were born in the U.S.,  $M = 1.42$ ,  $SD = .67$ . First-generation college students reported more discrimination,  $M = 2.28$ ,  $SD = 1.00$ , than those who were not,  $M = 1.67$ ,  $SD = .78$ . Age was not significantly correlated with the MEIM, Public Regard, or discrimination.

Correlations were used to test for relationships between emotional distress and RPI and MPEQ. Emotional distress was not related to the RPI but was negatively correlated with the MPEQ,  $r = -.21$ ,  $p = .001$ , and its subscales, Process  $r = -.22$ ,  $p < .001$ ; Outcome  $r = -.18$ ,  $p = .005$ . Emotional distress did not significantly differ by race,  $F(3, 244) = 1.52$ ,  $p = .21$ , or condition,  $t(246) = .15$ ,  $p = .88$ . There was a significant negative correlation between emotional distress and Public Regard,  $r = -.15$ ,  $p = .02$ , and emotional distress was not significantly correlated with the MEIM or discrimination. These preliminary analyses demonstrated that Public Regard (an independent variable) and the MPEQ and its subscales (dependent variables) were significantly related to emotional distress. Hence, emotional distress was included as a control variable in analyses including Public Regard and the MPEQ or its subscales.

Descriptive analyses were conducted to understand racial/ethnic differences in demographic variables, ERI, and discrimination. A series of chi-square analyses were used to understand race/ethnicity differences in other demographic variables. These analyses indicated that there were significant differences by race/ethnicity in US birth,  $\chi^2(3) = 77.91$ ,  $p < .001$ , parents born outside of the US,  $\chi^2(3) = 132.27$ ,  $p < .001$ , and being the first in the family to attend college,  $\chi^2(3) = 14.83$ ,  $p < .001$ .

Racial/ethnic differences in MEIM, Public Regard, and discrimination were investigated using ANOVAs (Table 13). There were significant racial/ethnic differences between each group in Public Regard, with White participants having the highest Public Regard, followed by Asian,

Hispanic/Latinx, and Black participants. White participants had significantly lower scores on the MEIM and both MEIM subscales in comparison to the other racial/ethnic groups. White participants had significantly lower discrimination in comparison to all other racial/ethnic groups and Black participants reported significantly higher discrimination in comparison to all other racial/ethnic groups.

### **Race/Ethnicity Differences in Attitudinal Treatment Engagement**

Means and standard deviations of the attitudinal engagement variables by race/ethnicity are presented in Table 14. Three 2X3 factorial ANOVAs were conducted to examine the main effect of website condition, main effect of race/ethnicity, and interaction between race/ethnicity and condition on treatment engagement attitudes. Results for the MPEQ are presented in Table 15. For the total MPEQ and MPEQ Outcome, there were no significant main effects or interactions. There was a significant main effect in the MPEQ Process subscale. Post-hoc LSD analyses demonstrate that Black participants,  $M = 74.33$ ,  $SD = 14.77$  had lower Process scores compared to White participants,  $M = 82.39$ ,  $SD = 12.94$ ,  $p = .006$ ,  $d = -.58$ , and Hispanic/Latinx participants,  $M = 80.74$ ,  $SD = 12.57$ ,  $p = .04$ ,  $d = -.47$ , but there was no difference between Black and Asian participants,  $M = 78.64$ ,  $SD = 14.31$ ,  $p = .19$ ,  $d = -.30$ .

Three 2X3 factorial ANOVA testing for condition, race/ethnicity, and race/ethnicity X condition interaction predicting the RPI and its subscales is presented in Table 16. For the RPI and both subscales, the main effects of race/ethnicity and condition were not significant, nor was the interaction term.

As a post-hoc analysis, Black, Hispanic/Latinx, and Asian participants were collapsed into a people of color group and compared with White participants on the MPEQ and RPI variables, but no analyses were significant.

In summary, varying diversity of clinicians did not significantly affect attitudinal engagement. There were no racial/ethnic differences in the RPI or MPEQ and there was no interaction between condition and race/ethnicity. There was a difference by race/ethnicity in the MPEQ Process subscale such that Black participants reported lower scores in comparison to White participants. Overall results did not support study hypotheses. As condition was not related to treatment engagement, it was not included as a control variable in future analyses.

### **ERI/Discrimination and Treatment Engagement**

The second primary research question of Study 2 was whether there was an influence of the MEIM, Public Regard, and Discrimination on attitudinal treatment engagement. Relations were first examined using bivariate correlations (Table 17). The full-scale MPEQ was positively correlated with the MEIM and both MEIM subscales and Public Regard and was negatively correlated with Discrimination. The MPEQ Process subscale was positively correlated with the MEIM, which seemed to be driven by a positive correlation with the Commitment subscale of the MEIM, as there was no significant correlation with the Exploration subscale. The full-scale MPEQ was also positively correlated with Public Regard and negatively correlated with Discrimination. The MPEQ Outcome subscale was positively correlated with the MEIM total, both MEIM subscales, and Public Regard. MPEQ Outcome was not significantly related to discrimination.

The RPI was positively correlated with the MEIM and both MEIM subscales but was not significantly correlated with Public Regard or discrimination. Both RPI subscales were positively correlated with the MEIM and both MEIM subscales. Additionally, the Openness subscale of the RPI was positively correlated with Public Regard.

As noted earlier, the MPEQ and Public Regard were both significantly associated with emotional distress. To account for this, partial correlations were conducted between the MPEQ, its subscales, and Public Regard, while controlling for emotional distress. The MPEQ,  $r = .22$ ,  $p < .001$ , MPEQ Process,  $r = .26$ ,  $p < .001$ , and MPEQ Outcome,  $r = .14$ ,  $p = .03$ , were positively correlated to Public Regard.

In summary, the full-scale MEIM and the Commitment subscale were positively related to both the RPI and MPEQ. The Exploration subscale of the MEIM was positively related to the total MPEQ and the Outcome subscale, but not the Process subscale, and was positively related to the RPI. Discrimination was negatively related to total MPEQ and the Process subscale but was not related to MPEQ Outcome or the RPI. Finally, Public Regard was positively related to the MPEQ and the Openness subscale of the RPI.

Given the pattern of bivariate correlations, a series of multiple regressions were run to determine unique relations between the MEIM, discrimination, and Public Regard on MPEQ and RPI scores (Table 18). Results from multivariate regression predicting the RPI showed that the three variables predicted 11% of the variance in RPI total scores, with the MEIM and Public Regard emerging as uniquely significant. Similar results were found for the MPEQ total scores, the three variables predicted 12% of the variance, with the MEIM and Public Regard uniquely significant. Together, these results suggest that ethnic-racial identity variables (MEIM and Public Regard) are distinctly related to treatment engagement attitudes, but discrimination experiences do not further contribute to explaining variability in treatment engagement.

#### **ERI/Discrimination and Treatment Engagement Moderated by Race/Ethnicity.**

Post-hoc analyses were conducted to test for race/ethnic group as a moderator in the relationship between ERI/discrimination and the treatment engagement variables through a series of nested

multigroup path analyses. For models that differed in nested model comparisons, critical ratio  $z$ -tests were used to test for significant racial/ethnic group differences in the path from the predictor to the treatment engagement variables. A conceptual model is presented in Figure 2. Because emotional distress was a potential confound in some instances, it was included as a control variable in all analyses. For each analysis, a model with all paths allowed to be freely estimated across racial/ethnic group, with the exception of the path between emotional distress and the outcome variables, was compared to a model with all paths of interest constrained to be equal between racial/ethnic group. Paths between emotional distress and outcome variables were constrained across racial/ethnic groups, which allowed for the calculation of fit statistics (Figures 3 and 4).

Nested model comparisons indicated that the relationship between Public Regard and RPI and MPEQ, including subscales, differed by race/ethnicity (Tables 19 and 20). In contrast, the other models (e.g., those with MEIM and discrimination) did not differ by race/ethnicity. As shown in Table 21 and 22, Public Regard significantly predicted the RPI for Asian participants, which seems to have been driven by the Perseverance subscale as the Openness subscale was not significantly predictive of RPI for Asian participants. Public Regard also significantly predicted the Openness subscale for White participants.

Public Regard significantly predicted the MPEQ for Asian and Black participants and was marginally significant for Hispanic/Latinx participants, but the magnitude of this relationship did not differ significantly by racial/ethnic group. The relationship between Public Regard and MPEQ Process was also significant for Asian and Black participants and was marginally significant for Hispanic/Latinx participants (Table 23). The magnitude of this relationship was significantly larger for Asian participants in comparison to White participants.

The relationship between Public Regard and the Outcome subscale was not significant for any group.

In summary, MEIM and Public Regard jointly and uniquely predicted RPI and MPEQ scores across the whole sample, but discrimination did not. In nested model comparisons, the effect of Public Regard on RPI and MPEQ varied by race/ethnicity, while the effects of MEIM and discrimination did not. In terms of the RPI, the significant relation between Public Regard and RPI total scores seen in the full sample was driven by Asian students, for whom higher Public Regard predicted greater RPI. More specifically, higher Public Regard predicted greater RPI Perseverance but was unrelated to RPI Openness. For the MPEQ, the significant relation between Public Regard and MPEQ total scores was due to significant relations in Asian and Black students, and marginally significant effects in Hispanic/Latinx groups. In contrast, there was no relation between Public Regard and MPEQ total scores for White students. More specifically, higher Public Regard predicted greater MPEQ Openness for Asian and Black students but did not predict MPEQ Outcome. Overall, the pattern of significant paths suggests that Public Regard varied by race/ethnicity because of relatively larger effects among Asian students.

### **Discussion**

The purpose of the current studies was to investigate racial/ethnic differences in attitudinal treatment engagement among adolescents and young adults. While there is extensive evidence that youth of color are less likely to behaviorally engage in treatment (Cummings & Druss, 2011; Garland et al., 2005; Maura & Weisman de Mamani, 2017), there is less research on the attitudes that may contribute to this treatment engagement disparity. Both studies examined attitudes youth have toward engaging in early phases of treatment (when first admitted

or when looking for mental health services), in order to establish characteristics that could be targeted with interventions. Study 1 was a retrospective cohort study of attitudes about receiving therapy among adolescents who were admitted to a psychiatric inpatient unit over the course of a year. Study 2 was an experimental study of the impact of clinician diversity, ethnic-racial identity, and discrimination on attitudinal treatment engagement among college students looking at a university mental health clinic.

Both studies examined attitudinal treatment engagement by looking at self-reported readiness for psychotherapy including four sub-dimensions: a measure of lack of interest in receiving therapy, perceived interest in persevering with therapy when it becomes difficult, comfort with being open with a therapist, and perceived distress due to mental health difficulties. Study 2 only used two of these dimensions: perseverance and openness in therapy. Additionally, Study 2 included a measure of participants expectations regarding therapy, which included two subdimensions: expectations regarding the process of receiving therapy (e.g. attending appointments regularly, opening up with therapist) and expectations regarding the outcome of therapy (e.g. feeling better after therapy, learning more about self).

### **Attitudinal Treatment Engagement**

Across both studies, attitudinal treatment engagement was in the moderate to high range. In Study 1, the mean readiness for psychotherapy (RPI) was just above the mid-point of the scale, as were all subscales. This suggests that the adolescents admitted to the inpatient unit were on average moderately interested in receiving psychotherapy (RPI disinterest), willing to make an effort in therapy (RPI perseverance), open to sharing with a therapist (RPI openness), and distressed by their psychiatric problems (RPI distress). In Study 2, participants had generally positive expectations for psychotherapy (MPEQ), including positive expectations for the process

of receiving therapy (MPEQ process) and expectations for the consequences of receiving therapy (MPEQ outcome). Similar to Study 1, participants in Study 2 were moderately willing to make an effort in therapy and open to sharing with a therapist.

It is important to note that both studies investigated treatment engagement attitudes during the beginning stages of treatment seeking – right after admission and in considering attending a hypothetical clinic. It is possible that there are different barriers to treatment engagement that occur later in the process of seeking treatment. There is evidence that people of color are not only less likely to seek treatment but are also more likely to terminate prematurely (de Haan et al., 2013; Kazdin & Mazurick, 1994; Kim et al., 2016). The initial stages of treatment engagement were chosen because they are often not assessed but may be particularly important for people of color. As Yasui et al. (2017) postulate, people of color may have different conceptualizations of mental illness and more barriers to help-seeking, and thereby be less likely to have positive attitudes when considering contacting a clinic or when first admitted to a psychiatric inpatient unit.

It is also important to note that these studies focused on treatment engagement attitudes, and not behaviors. Both measures of attitudinal engagement have unique associations with treatment engagement behavior. The validation study of the RPI demonstrated that higher scores on the Distress subscale and lower scores on the Perseverance subscale were associated with less willingness to receive therapy (Ogrodniczuk et al., 2009). The validation study of the MPEQ found that the Process subscale was more related to participants seeking therapy in comparison to the Outcome subscale (Norberg et al., 2011). Thus, differences in treatment engagement attitudes may not correspond directly with differences in treatment engagement behaviors.

Causal relationships between attitudes and behaviors need to be investigated to better understand how to develop interventions to target racial/ethnic engagement disparities.

### **Racial/Ethnic and Gender Differences in Treatment Engagement**

Study 1 hypothesized that adolescents of color would report more negative attitudes toward engaging in therapy in comparison to White adolescents. Without control variables, Black patients reported significantly less distress due to their mental health in comparison to White patients. There were no significant differences in readiness for psychotherapy after controlling for Mood disorder diagnosis. When looking at the intersection between race and gender, there was a significant difference in disinterest for psychotherapy such that Black males reported the most disinterest, higher than other racial/ethnic groups and Black females. While some of this difference could be explained by Mood disorder diagnosis, there was still a portion of the relationship that was not explained by diagnosis. That is, Black males reported greater disinterest in psychotherapy than all other groups, and this difference was not due to lower levels of Mood disorders within this group.

While the results changed when the covariates were added, it is important to note racial/ethnic differences without covariates as they may contribute to perceptions of patients of color. Providers may struggle to attribute differences between racial/ethnic groups to other covarying factors. Without controlling for Mood disorders, Black patients reported lower distress than White patients. Black patients were also significantly less likely to be diagnosed with a mood disorder. A provider may perceive that Black patients tend to report less distress but may not attribute that difference to differences in diagnosis rather than race/ethnicity. Mood disorders were the most prevalent disorder among the sample of adolescents at the inpatient hospital, 70% of all patients in this study met criteria for a Mood disorder. It is possible that patients who did

not meet criteria for a Mood disorder may have felt out of place at an inpatient hospital or felt that the services provided in the hospital (e.g., individual therapy) were relevant or necessary only for people with Mood disorders. This feeling may be amplified for Black patients who do not meet criteria for a Mood disorder, resulting in more discomfort with and disinterest in receiving therapy.

While the overall results did not show global racial/ethnic group differences, the intersection of race and gender on specific subscales indicates that Black males are significantly higher in disinterest toward psychotherapy in comparison to White males. DuPont-Reyes et al. (2019) looked at differences in mental health stigma at the intersection of race and gender among youth and found that Black males had lower mental health literacy and greater avoidance of and discomfort with mental illness. These findings investigated stigma and attitudes regarding mental health in others and not the self, but evidence has shown that these forms of stigma are positively related (Cheng et al., 2013). Increased self-stigma may result in increased disinterest with engaging with therapy, as therapy may be a threat to one's sense of worth.

In looking at the questions that comprised the disinterest subscale of the RPI, some inquire about the course of one's mental health problems (e.g. "Although I have some problems, there is no urgent need to fix them," "My problems will eventually go away on their own."). It is possible that a person who does not attribute the problems they are experiencing to mental health would endorse higher scores on this subscale. Yasui et al. (2017) postulate that cultural and contextual factors can influence one's conceptualization of a problem and the meaning of that problem to the self. Specifically, members of racial/ethnic groups may not share the mainstream explanation of a problem as a mental health issue and may therefore be less interested in seeking professional mental health treatment. Similarly, research has demonstrated that Black people, as

well as other racial/ethnic minorities, are more likely to use informal sources of support rather than formal treatment (Harb et al., 2019; Woodward, 2011). It is possible that the observed difference in interest for psychotherapy may reflect Black males' attribution of their problem to causes other than mental health, and thus believing mental health treatment is less relevant to their current difficulties.

The nature of items on the RPI disinterest scale also raise the possibility that it measures different attitudes toward problems and problem-solving rather than disinterest in therapy specifically. If so, characteristics such as external locus of control or optimism may underlie the differences seen in Black males. Evidence suggests that Black youth are more likely to have an external locus of control and optimism (Wade, 1996; Webber & Smokowski, 2018), and this may be partly attributed to greater religiosity and preference for informal and spiritual sources of support (Ayalon & Young, 2005). Research on how race and gender jointly relate to factors such as locus of control and coping style among adolescents is limited; thus, it is unclear if Black male adolescents differ from Black adolescent females or males from other marginalized groups. One potentially relevant factor specific to Black males is John Henryism, which has been hypothesized as a coping strategy used by Black males in response to prolonged, external stressors associated with discrimination (James, 1994). John Henryism is an individualistic coping strategy emphasizing the need to continually be strong, which may lead to increased allostatic load and reduced help-seeking (Jones et al., 2019; Watkins et al., 2010). To date, there is limited empirical research on John Henryism in general and even less with adolescents. Future research should explore whether this is an important culturally relevant coping strategy among Black, male adolescents.

The setting in which Study 1 was conducted is also important to consider from a cultural lens. There has not been much research on the perceptions of young Black males of treatment in a psychiatric inpatient unit. Whaley (2004) draws connections between the sociocultural context, particularly the increased incarceration rate of Black men, and increases in reported paranoia on a psychiatric inpatient unit, arguing that there are similarities between inpatient units and prisons that may trigger cultural mistrust and healthy cultural paranoia. It is possible that Black males are less interested in receiving psychotherapy on an inpatient unit because of mistrust of the staff due to the necessary restrictions of freedom. The reality of the increased incarceration of Black men may be a cultural factor that impacts their conceptualization of a potential mental health problem or desire to seek professional health for their mental health (Yasui et al., 2017).

Additionally, similarities between a psychiatric inpatient unit and criminal incarceration may interact with referral source for adolescents of color, as they are more likely to be referred for treatment by an external agency rather than self- or family-referred (Takeuchi et al., 1993). Black and Hispanic/Latinx youth are more likely to report that they are receiving mental health treatment for depression because their problems are causing problems for others (e.g. breaking rules, disruptive behavior), rather than because their problems are subjectively distressing (Cummings et al., 2014). Lindsey, Brown, and Cunningham (2017) posit that Black males are experiencing a crisis of untreated depression that presents as antisocial behaviors as a “mask,” and that this crisis is contributing to the increasing suicide rate among Black youth. Indeed, there is evidence that Black and Hispanic/Latinx youth tend to present with more severe behavioral symptoms of depression in comparison to White youth, who tended to have more self-reported symptoms of depression (Stein et al., 2010). The data in the current study show that some of the lower treatment engagement among Black boys is attributed to Mood disorder diagnosis. It is

possible that Black males are presenting with conduct problems that were identified at school or another domain yet have a need for therapy for both conduct and mood difficulties. They may be less interested in therapy because they see their treatment as a punishment resulting from their behaviors, even if the treatment could be helpful. The interaction between cultural context and perceived reasons for referral for treatment may impact disinterest in psychotherapy.

It is important to note that adolescents of color, for the most part, did not differ from White adolescents in attitudes toward psychotherapy. There were no differences by race/ethnicity in perseverance and openness, suggesting that adolescents are equally likely to work toward change and be open with a therapist. Additionally, the average levels of readiness in psychotherapy for the sample were around the mid-point of the scale, which demonstrates that patients who were admitted to the inpatient unit were moderately ready to engage in psychotherapy during their admission. These findings are encouraging and suggest that disparities in treatment engagement may not be as concerning as previous research that was conducted in outpatient setting would suggest (McKay & Bannon, 2004).

The lack of differences by race/ethnicity and overall moderate readiness for psychotherapy demonstrate that inpatient settings may be a unique opportunity to provide important psychotherapy interventions that may not be as available on an outpatient basis. Specifically, when patients are admitted to an inpatient hospital, many of the pragmatic barriers that exist in outpatient treatment are not present (e.g. transportation, waiting lists). Additionally, moderate readiness for psychotherapy in combination with a positive experience with psychotherapy during an inpatient admission may increase willingness to follow through with discharge referrals. In fact, the availability and quality of psychotherapy on inpatient units may be even more impactful for Black adolescents, especially Black males, as it may be a unique

opportunity for interventions that could increase attitudinal treatment engagement that could affect psychotherapy participation both during their admission and after discharge.

Similar to Study 1, results from Study 2 also revealed no racial/ethnic differences in full-scale readiness for psychotherapy (RPI) or full-scale expectations for psychotherapy (MPEQ). In looking at the subscales, however, Black participants reported lower scores on the MPEQ Process subscale, suggesting that Black students had more negative expectations regarding the process of receiving psychotherapy, but not about the outcome of receiving therapy. It is encouraging that Black participants did not have a more negative view of the effect of therapy on positive outcomes. This may be due to the high education level of this sample, as well as the availability of mental health services. University students likely have increased mental health literacy and beliefs in the efficacy of treatment. Greater level of education has been associated with increased mental health literacy, and mental health literacy has been shown to be associated with more positive views of receiving therapy (Cheng et al., 2018; Reavley et al., 2012)

Unfortunately, the subscale that differed in Study 1 (RPI Disinterest) was not given in Study 2 due to concerns about survey length. Thus, it is not possible to know if the race by gender interaction seen in adolescents in an inpatient psychiatric unit would also be evident among university students. Interestingly, the RPI Disinterest subscale and MPEQ process subscale do not have many similarities. RPI Disinterest targets one's perception of their problems ("My problems will eventually go away on their own," "Although I have some problems, there is no urgent need to fix them."), as well as one's desires to target their problems in therapy ("I don't have much desire to work hard in therapy."). The MPEQ Process scale, in contrast, targets more relational factors and expectations regarding the therapist ("I will feel comfortable with my therapist," "I expect my therapist will provide support," "My therapist will

be sympathetic.”). It is possible that these findings demonstrate racial/ethnic differences in two separate but related dimensions of treatment engagement. While RPI Openness targets a similar construct to MPEQ Process, the RPI Openness questions focus on the clients’ comfort with sharing with a therapist and not the client’s perception of the therapist’s response (“I will have no trouble being completely honest and open with the therapist,” “I will be able to talk freely about my problems with the therapist.”). This difference may be key, as there were no racial/ethnic differences in mean RPI Openness scores in both studies and, in Study 2, Public Regard was associated with increased RPI Openness scores for White participants only. It appears that when the focus is shifted from expectations of the self in treatment to expectations of the therapist, racial/ethnic differences may emerge. Thus, racial/ethnic differences in perceptions of therapy may be driven by expectations of the therapist’s behavior and concerns about one’s relationship with a therapist, rather than expectations of the self in therapy.

Taylor and Kuo (2018) applied the Theory of Planned Behavior (TPB) to help-seeking among Black people to better understand disparities in treatment engagement. They posited that Black people are more likely to hold beliefs regarding mental health and mental health treatment that would negatively affect their intention to engage in treatment, such as perceiving the need for treatment as a sign of weakness. One of the components of TPB is that beliefs about the difficulty of performing a behavior will impact one’s intention to engage in the behavior. This component of TPB has been shown to be related to delaying treatment after psychiatric hospital discharge for Black patients experiencing psychosis (Compton & Esterberg, 2005). There are several aspects of receiving treatment that may be perceived as difficult (transportation, insurance, etc.). There is evidence to suggest that the act of sharing information with a provider may be especially difficult for Black people. Black women have shown hesitance to share their

personal information with a professional and are often encouraged to handle their difficulties on their own (Nicolaidis et al., 2010; Thompson et al., 1994; Watson & Hunter, 2015). This hesitance to share personal information with a provider may be the result of previous negative experiences in attempting to communicate with providers. For example, provider communication often differs when interacting with patients of color, such as spending less time establishing rapport or being more verbally dominant (Alegria et al., 2019). This anticipated difficulty communicating with providers may be particularly impactful for Black patients, who have demonstrated increased mistrust for medical and mental health providers (Turner et al., 2019).

### **Clinician Diversity**

Based on the theoretical underpinnings of social identity threat (Steele et al., 2002), the main hypothesis of Study 2 was based on the assumption that people from marginalized groups will look for cues that a new environment will be accepting of their identities. Specifically, Study 2 applied this theory to the mental health field, hypothesizing that people of color may feel more comfortable or have more positive expectations about a clinic if there are clear signs that members of their group are represented and valued. The results did not support the hypotheses, as clinician diversity had no significant associations with treatment engagement. This may be due to the experimental manipulation, which manipulated the pictures of clinicians who were available in the clinic but did not assign an individual clinician to the participant. When searching for clinicians, patients typically search for individual clinicians rather than looking at the diversity of a clinic. Clinician diversity may be more impactful when a patient is searching for an individual clinician, as research demonstrates that patients of color prefer to be matched with a therapist of their racial/ethnic group (Cabral & Smith, 2011). In college mental health

centers, however, patients are typically not allowed to pick their clinician, so the current study was more closely replicating the college mental health center experience.

Websites for clinics sometimes have a statement of diversity ideology, which was not included on the website for the current study. When studying Black professionals, Purdie-Vaughns et al. (2008) found that multicultural ideology espoused by a potential employer was associated with increased comfort with the employer. Similarly, Hall et al. (2018) found that gender inclusive policies, but not gender representation, influenced the amount of social group identity threat women in STEM fields anticipated experiencing in their workplace. More broadly, multiculturalism is positively associated with high quality interactions across racial/ethnic groups and is negatively associated with discrimination (Leslie et al., 2019). Given that college students are often not allowed to pick their clinician, a diversity statement on a website that promotes multiculturalism may be impactful in promoting treatment engagement among patients of color.

It is also possible that clinician diversity does not affect intentions to seek treatment but does affect willingness to engage in help-seeking behaviors. A critique of studies investigating the influence of clinician diversity/ethnic-matching on engagement is that several studies focus on attitudes toward help-seeking rather than evaluating actual help-seeking behaviors (Hayes et al., 2011). It is possible that participants in the current study have a positive attitude toward seeking mental health services, but racial/ethnic disparities may have been present if the study investigated rates of treatment engagement behaviors when distressed. It is also possible that clinician diversity does not affect treatment engagement attitudes at all. This would be an encouraging possibility, as many people of color who are seeking therapy are assigned a therapist of a different race/ethnicity. Future research should focus on understanding factors that could increase engagement and outcomes among students of color.

Finally, it should be noted that participants may not have attended to the diversity of the clinicians on the websites. While the current study included an attention check to ensure that participants remembered various aspects of the website (which demonstrated that participants generally attended to the website details), the attention check did not ask specifically about the diversity of the clinicians who were featured on the website. This is also encouraging, as previous research suggests that people of color are more likely to attend to cues in their environment that they may encounter discrimination – such as diversity of individuals with whom they would be interacting (Steele et al., 2002). It is possible that students of color do not view White therapists as potentially threatening to their social identity. That being said, it is possible that the lack of significant findings is due to the lack of salience of the experimental manipulation. Significant findings may have been found if the manipulation had been more salient to the participants.

### **Ethnic-Racial Identity and Discrimination**

In Study 2, ERI (including Public Regard) was hypothesized to be positively associated and discrimination was hypothesized to be negatively associated with attitudinal treatment engagement. For the most part, higher scores on the MEIM were associated with more positive views of therapy. Public regard was positively associated with more positive expectations for therapy and with openness to speaking with a therapist, but not with the full-scale readiness for psychotherapy or with willingness to persevere in therapy. Interestingly, discrimination was only negatively associated with more negative views about the process of obtaining therapy, not with beliefs about therapy outcomes or with reported readiness to receive therapy.

For the most part, having a more positive view of one's racial/ethnic group was associated with more positive attitudes toward treatment engagement. This confirms the study

conducted by Abdou and Fingerhut (2014), which found that ethnic identification was more protective of Black women experiencing anxiety in a threatening medical environment. Interestingly, the study found that ERI exploration, and not commitment, was protective, contradicting the current study's finding that ERI exploration was unrelated to expectations. It is possible that this is because the current study is assessing imagined treatment engagement in early phases of treatment among university students who may not have any need for treatment, rather than when the individual has already engaged in treatment. While engaging in behaviors that bring one closer to one's racial/ethnic group may alleviate anxiety when in a threatening medical or mental health provider interaction, a sense of belonging to a group may be protective when considering what it would be like to engage with a medical or mental health provider.

While discrimination was negatively related to some subdimensions of treatment engagement attitudes, it was not related to all. Specifically, it did not affect participants' view of the positive outcomes associated with psychotherapy, a desire to be open with a therapist, or willingness to work hard in therapy. This finding was surprising, as previous research has shown that discrimination is associated with multiple indicators of treatment engagement, including premature termination, more unmet health care needs, and feeling that treatment is unhelpful (Benjamins & Whitman, 2014; Mays et al., 2017). Discrimination was, however, negatively associated with expectations regarding therapy, and this finding seems to be driven by negative associations with expectations regarding the process of receiving therapy. The developers of the MPEQ found that the process subscale of the measure was highly related to desire to seek relationships (Norberg et al., 2011), suggesting that those who have more positive expectations regarding the process of receiving therapy also feel more positive about seeking social interactions. It is possible, then, that expectations regarding the process of obtaining therapy are

more susceptible to social concerns, such as experiences of discrimination. Thus, while discrimination was not associated with some of the subdimensions of attitudinal treatment engagement, it may affect attitudes that lead to lower behavioral treatment engagement.

**ERI/Discrimination and Treatment Engagement by Racial/Ethnic Group.** The relationship between ERI and discrimination and attitudinal treatment engagement was further probed with post-hoc analyses to test if these relationships differed by racial/ethnic group. Analyses demonstrated that racial/ethnic group moderated the relationship between public regard and treatment engagement variables (RPI and MPEQ). Specifically, the relationship between public regard and RPI was only significant for Asian participants, which seems to have been driven by the perseverance subscale. The relationship between public regard and the MPEQ was significant for both Asian and Black participants, which seems to have been driven by the process subscale. Both RPI Perseverance and MPEQ Process target the processes and actions that are involved with receiving mental health treatment (e.g. working between sessions, enduring discomfort, attending sessions regularly). This finding suggests that the perception that other groups view Black or Asian people negatively is associated with more negative views of the actions and processes that are involved with therapy. This is particularly interesting given that race/ethnicity did not moderate the relationship between discrimination and treatment engagement. This suggests that it is not negative experiences that specifically impact Black and Asian treatment engagement, but rather the internalization of that experience into beliefs about other groups' perception of one's ethnic group.

Results also shows that the magnitude of the relationship between public regard and MPEQ Process was significantly larger for Asian in comparison to White participants. This was the case for the relationship between public regard and the MPEQ, but it seems to be driven by

the Process subscale. It is particularly interesting that the magnitude of the relationship between public regard and MPEQ process was not only significant for Asian participants, but that this relationship was significantly stronger in comparison to White participants, while there were no mean group differences in MPEQ Process. In other words, Asian participants do not have lower MPEQ Process scores overall, but their MPEQ Process seems to vary according to level of Public Regard in ways that are not evident in students from other racial/ethnic backgrounds.

Previous studies on Asian and Asian American college students' use of mental health services suggests they initiate services at a higher level of emotional distress and attend fewer sessions overall (Kearney et al., 2005; Kim et al., 2016). Thus, Asian and Asian American students may be more hesitant to seek mental health services until their problems reach a higher level and may persevere less in therapy once started. Kim et al. (2016) suggest that this may be due to acculturative stress. Plausibly, acculturative stress may be reflected in public regard in this study, as concerns about adjusting to the mainstream culture may be influenced by perceptions of how other groups view one's ethnic group. However, these studies have focused on Asian and Asian American students as one group rather than a highly heterogeneous group with varied histories and experiences within the United States. Indeed, few studies specifically target Asians and examine results by sub-groups. Kim et al. (2016) found different patterns of behavioral engagement when breaking their sample into sub-groups of Asians. Additionally, Abe-Kim et al. (2007) found different patterns of mental health service use and satisfaction depending on immigration history and ethnicity and Miller et al. (2011) found differences in professional mental health help seeking attitudes by generational status and subdimensions of acculturation. Public regard could be affected by several of these factors, as one's beliefs about others' views of Asians, Asian Americans, or one's specific ethnic sub-group would be vastly different

depending on how long one or one's family has been in the United States, history of one's ethnicity in an area, and level of acculturation.

The Model Minority Myth, or the expectation that Asians are more successful in comparison to other racial/ethnic groups, may also attribute to more negative attitudes toward treatment engagement (Tummala-Narra et al., 2018). Studies show that internalization of this stereotype is related to minimizing psychological distress and more negative attitudes toward seeking help for mental health, and that the Model Minority Myth interacts with experiences of discrimination to negatively impact attitudes toward mental health treatment (Gupta et al., 2011; Tummala-Narra et al., 2018). This effect might be particularly relevant among Asian college students, who are navigating academic and social stressors that might challenge their internalization this myth. Asian students who have internalized the Model Minority Myth and also have internalized the belief that other racial/ethnic groups view their group poorly may be striving for success in multiple domains, but also be less likely to seek out resources that are viewed for those who are weak or for those who are in the majority group (i.e. mental health).

In a study of over 60,000 university students, Lipson et al. (2018) found that Asian and Asian American students did not differ in rates of mental health problems compared to White students, but did report more stigma associated with mental health treatment and less use of treatment. Thus, Asian American college students may have similar mental health needs as their peers but be less likely to engage in services. While Asian students as a group did not report lower treatment engagement attitudes in this study, the current results do indicate that certain Asian American students, particularly those who feel their ethnic group is devalued by others, may be less likely to engage in therapy.

### **Limitations and Strengths**

As with any study, the current studies have a number of limitations and strengths. These studies focused on different indicators of attitudinal treatment engagement, which has not been studied extensively (Staudt, 2007). Through studying attitudinal, in contrast to behavioral, treatment engagement, there is more potential to identify mechanisms for change. Additionally, rather than simply focusing on racial/ethnic differences in attitudinal engagement, Study 2 also looked at characteristics and the individual level that could contribute to group differences. There have been calls to expand research on racial/ethnic health disparities to use independent variables that could elucidate mechanisms that could drive these disparities, rather than simply using racial/ethnic group as an independent variable (Volpe et al., 2019). By looking at independent variables apart from race/ethnicity, this research has the potential to identify contextual factors that drive racial/ethnic disparities.

The current study also investigated attitudinal treatment engagement across developmental stages and treatment settings. The majority of treatment engagement research has investigated adults and outpatient treatment, resulting in a dearth of research involving adolescents and college students or at higher levels of care (Alegria et al., 2010; Foo Kune et al., 2019). Adolescents may have unique factors that could affect their attitudes about engaging in mental health treatment, such as increased concern about stigma from peers, pressure to receive treatment from parents, or lack of knowledge about mental health (Cauce et al., 2002; DuPont-Reyes et al., 2019; Gopalan et al., 2010). College students have greater access to mental health treatment while also learning to deal with the new pressures of the college setting (Foo Kune et al., 2019; Kim et al., 2016). Attitudinal treatment engagement may be especially important at higher levels of care, where treatment may be non-voluntary in some respect.

There are also several study limitations. One limitation of Study 1 is the lack of data regarding referral source. While there is previous research suggesting that youth of color are more likely to be mandated to receive treatment or be referred for treatment through a social/legal agency (Takeuchi et al., 1993), this research only investigated outpatient mental health and is dated. Referral source may be an important factor in determining level of attitudinal treatment engagement, especially among adolescents of color. Additionally, Study 1 did not include measures of ethnic-racial identity or experiences of discrimination, which may have contributed to the observed racial/ethnic and gender differences. Future research should not only investigate racial/ethnic differences but include measures of factors that may be underlying these differences. Finally, there were differences in group sizes, which limited the power to test for race by gender interactions and differences between Black and Hispanic/Latinx adolescents.

A limitation of Study 2 is limited power for Black participants. Although the initial goal was to have equal groups of the three racial/ethnic minority groups, fewer Black students were enrolled despite extending the study timeline in order to get more participants in this group. While main effects by race were found, the small group size likely affected the ability to test for moderating effects of race/ethnicity on how ERI and discrimination related to treatment engagement. Additionally, there was not sufficient power to investigate race-gender interactions, which were found in Study 1. Finally, while Study 2 found significant findings for Asian/Asian-American participants, there was not a large enough sample to investigate these findings by sub-groups or immigration histories, which has been shown to be very important in previous studies (Abe-Kim et al., 2007; Kim et al., 2016).

Neither of the studies investigated the relationship between attitudinal and behavioral treatment engagement. This relationship has not been studied extensively and needs to be

established. Some research suggests that indicators of attitudinal treatment engagement are differentially associated with initial treatment engagement (Norberg et al., 2011; Ogradniczuk et al., 2009). There also may be differences in how indicators of attitudinal treatment engagement effects different stages of treatment engagement, especially among patients of color (Yasui et al., 2017). Finally, the study was not limited to students with mental health needs. Plausibly, attitudes about therapy may change when a person needs mental health services personally.

### **Future Directions**

This study investigated racial/ethnic differences in attitudes toward treatment engagement among adolescents and young adults. Both studies had interesting findings regarding Black participants: Study 1 found that Black males had significantly higher disinterest in therapy. Study 2 found that Black participants more negative views regarding the process of receiving psychotherapy, and that exploring one's ethnic-racial identity and believing that other racial/ethnic groups have a positive view of Black people were associated with more positive views of the process of receiving therapy. Future studies should focus on these more nuanced indicators of attitudinal engagement and investigate how they are related to behavioral treatment engagement and treatment outcomes.

Study 2 found several associations between ERI and attitudinal treatment engagement for Asian and Asian American participants, and that these relationships were often larger for Asian participants in comparison to other racial/ethnic groups. There is evidence to suggest that some groups that fall under the Asian American umbrella (Indian, Korean, and Vietnamese Americans) attend fewer counseling sessions and other groups have greater initial severity when seeking mental health services (Chinese, Filipino/a, Korean, and Vietnamese Americans) (Kim et al., 2016). As with all racial/ethnic groups, these categories often obscure rich diversity within

groups. Also, we found that public regard may be a particularly important within-group characteristic among Asian and Asian American students. Future research should investigate within group variability associated with subgroup nationalities, cultural factors, and racial/ethnic identity to better understand treatment engagement.

### **Clinical Implications**

The goal of the current studies was to investigate attitudinal engagement with the hope of establishing potential areas for intervention to reduce treatment engagement disparities. Given that the primary disparities in attitudinal treatment engagement were among Black participants, interventions targeting this population should focus on attitudes regarding being in therapy. Outreach efforts to Black communities may be especially helpful in reducing negative attitudes regarding therapy (Harb et al., 2019), especially outreach efforts that partner with informal support networks (faith leaders, peer support, etc.). Additionally, integrating treatment into settings where Black people are already comfortable attending, such as integrated primary care offices or school-based mental health care, could help reduce stigma or perceived difficulty in receiving formal mental health care. There is evidence to support the use of online mental health prevention programs in reaching Asian university students who would not have come to a student mental health clinic (Rith-Najarian et al., 2019). Outreach aimed at destigmatizing mental health services aimed specifically at university groups that serve large numbers of Asian and Asian-American students (e.g., the Korean Student Association) may be particularly useful (Foo Kune et al., 2019). Continued research is needed to establish preventative interventions to target under-served Asian and Asian American students who are less likely to seek mental health treatment.

Assessing a patient's level of comfort with receiving treatment and knowledge about their mental health condition may be particularly helpful in increasing treatment engagement and activation among patients of color, who may have more ambivalent feelings about receiving treatment or have less mental health literacy (Alegria et al., 2019; Yasui et al., 2017). The Cultural Formulation Interview provides helpful ways for providers to assess the ways that culture affects how a patient perceives their mental health condition and treatment (American Psychiatric Association, 2013). This may be especially helpful for Asian American patients, as they had many associations between ERI and attitudinal engagement.

### **Conclusion**

This study expands literature on treatment engagement disparities among people of color by elucidating attitudes toward treatment among adolescents and young adults. On a positive note, there were not dramatic racial/ethnic differences in most indicators of readiness for psychotherapy among adolescent patients. The exception to this was in interest for therapy, for which Black adolescent males reported more disinterest than most other groups. For Black college students, expectations for the process of receiving therapy were overall more negative in comparison to White students. Interestingly, while there were no mean differences in attitudes toward therapy for Asian students, how they felt about their ethnic-racial identity consistently predicted their attitudes toward therapy in ways that were not evident in most other groups. Additional research using a larger sample of diverse adolescents and young adults is needed to elucidate the effect of ERI and race/gender interactions in attitudinal treatment engagement. By focusing on attitudes about treatment rather than treatment behaviors, the findings in this study have the potential to inform clinical interventions targeting treatment engagement among young adults and adolescents of color. Additionally, interventions that target attitudes rather than

behaviors may also improve clinical outcomes, as youth who are attitudinally engaged may be more committed to treatment, thus experiencing more positive outcomes. As our world becomes increasingly diverse, it has become imperative that clinicians and clinical researchers understand how to engage with and provide mental health services to youth from marginalized backgrounds.

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## Study 1 Tables and Figures

Table 1. Readiness for Psychotherapy by Gender

	Total RPI	Disinterest	Perseverance	Openness	Distress
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Male	40.53 (11.81)	13.35 (4.66)	18.55 (4.08)	18.08 (3.88)	17.26 (4.92)
Female	41.37 (10.45)	11.47 (3.32)	17.87 (4.16)	16.27 (4.37)	18.87 (4)
	<i>t</i> (230.74) * = .67, <i>p</i> = .49	<b><i>t</i>(199.93) * = -4.08,</b> <b><i>p</i> &lt; .001</b>	<i>t</i> (375) = -1.53, <i>p</i> = .13	<b><i>t</i>(375) = -3.99,</b> <b><i>p</i> &lt; .001</b>	<b><i>t</i>(218.36) * = 3.21,</b> <b><i>p</i> = .002</b>

\*indicates Welch-Satterthwaite adjustment for degrees of freedom due to significant differences in variance

Note. RPI = Readiness for Psychotherapy Index

Table 2. Readiness for Psychotherapy by Diagnosis

Diagnosis	Yes	No	
Mood <i>n</i> = 257, 70.20%	42.54 (10.66)	37.69 (10.84)	<b><i>t</i>(366) = -3.98, <i>p</i> &lt; .001</b>
Anxiety <i>n</i> = 243, 64.10%	42.88 (10.26)	37.86 (11.36)	<b><i>t</i>(366) = -4.33, <i>p</i> &lt; .001</b>
Trauma <i>n</i> = 72, 19%	40.39 (9.25)	41.24 (11.29)	<i>t</i> (366) = .59, <i>p</i> = .56
Eating <i>n</i> = 18, 4.70%	42.42 (10.42)	41.01 (10.96)	<i>t</i> (366) = -.52, <i>p</i> = .61
Disruptive <i>n</i> = 110, 29%	38.56 (11.30)	42.10 (10.62)	<b><i>t</i>(366) = 2.84, <i>p</i> = .005</b>
ADHD <i>n</i> = 74, 19.50%	42.30 (10.06)	40.77 (11.13)	<i>t</i> (366) = -1.07, <i>p</i> = .29
Psychosis <i>n</i> = 33, 8.70%	39.48 (11.21)	41.23 (10.90)	<i>t</i> (366) = .88, <i>p</i> = .38

Table 3. Disinterest Subscale by Diagnosis

Diagnosis	Yes	No	
Mood	11.51 (3.44)	13.55 (4.61)	<b><math>t(165.91)^* = 4.22, p &lt; .001</math></b>
Anxiety	11.51 (3.50)	13.20 (4.42)	<b><math>t(228.59)^* = 3.81, p &lt; .001</math></b>
Trauma	11.96 (3.20)	12.16 (4.09)	$t(131.80)^* = .45, p = .65$
Eating	11.22 (2.58)	12.16 (4.00)	$t(21.31)^* = 1.47, p = .16$
Disruptive	12.55 (3.76)	11.94 (3.99)	$t(374) = -1.38, p = .17$
ADHD	11.80 (3.48)	12.20 (4.04)	$t(374) = .79, p = .43$
Psychosis	12.33 (3.51)	12.10 (3.98)	$t(374) = -.33, p = .74$

*\*indicates Welch-Satterthwaite adjustment for degrees of freedom due to significant differences in variance*

Table 4. Perseverance Subscale by Diagnosis

Diagnosis	Yes	No	
Mood	18.14 (3.88)	18.03 (4.71)	$t(179.84) = -.23, p = .82$
Anxiety	18.37 (3.78)	17.65 (4.70)	$t(234.03) = -1.51, p = .11$
Trauma	17.44 (3.91)	18.27 (4.18)	$t(375) = 1.52, p = .13$
Eating	16.88 (4.21)	18.17 (4.13)	$t(375) = 1.25, p = .21$
Disruptive	17.32 (4.50)	18.43 (3.95)	<b><math>t(375) = 2.37, p = .02</math></b>
ADHD	18.35 (3.93)	18.05 (4.19)	$t(375) = -.56, p = .58$
Psychosis	17.67 (4.72)	18.15 (4.09)	$t(375) = .64, p = .52$

Table 5. Openness Subscale by Diagnosis

Diagnosis	Yes	No	
Mood	16.40 (4.28)	18.07 (4.09)	<b><math>t(375) = 3.52, p &lt; .001</math></b>
Anxiety	16.67 (4.26)	17.31 (4.32)	$t(375) = 1.40, p = .16$
Trauma	15.31 (4.14)	17.27 (4.25)	<b><math>t(375) = 3.52, p &lt; .001</math></b>
Eating	15.44 (3.58)	16.97 (4.31)	$t(375) = 1.48, p = .14$
Disruptive	16.05 (4.61)	17.25 (4.11)	<b><math>t(375) = 2.48, p = .01</math></b>
ADHD	16.70 (4.12)	16.95 (4.34)	$t(375) = .44, p = .66$
Psychosis	15.06 (4.56)	17.08 (4.23)	<b><math>t(375) = 2.60, p = .01</math></b>

Table 6. Distress Subscale by Diagnosis

Diagnosis	Yes	No	
Mood	19.65 (3.55)	15.17 (4.59)	<b><math>t(170.21) = -9.22, p &lt; .001</math></b>
Anxiety	19.47 (3.68)	16.21 (4.81)	<b><math>t(218.18) = -6.79, p &lt; .001</math></b>
Trauma	19.9 (3.44)	17.94 (4.51)	<b><math>t(132.48) = -4.05, p &lt; .001</math></b>
Eating	21.22 (2.96)	18.17 (4.07)	<b><math>t(373) = -2.91, p = .004</math></b>
Disruptive	17.97 (4.96)	18.45 (4.15)	$t(170.53) = .88, p = .34$
ADHD	19.16 (3.87)	18.10 (4.50)	$t(373) = -1.86, p = .06$
Psychosis	19.09 (4.08)	18.24 (4.42)	$t(373) = -1.07, p = .29$

Table 7. Racial/Ethnic Group Differences in Diagnosis

	<u>Mood</u>	<u>Anxiety</u>	<u>Trauma</u>	<u>Eating</u>	<u>Disruptive</u>	<u>ADHD</u>	<u>Psychosis</u>
White <i>n</i> = 254	182 (71%)	165 (65%)	46 (18%)	13 (5%)	73 (29%)	56 (22%)	19 (7%)
Hispanic <i>n</i> = 83	63 (76%)	53 (64%)	20 (24%)	1 (1%)	19 (23%)	12 (14%)	11 (13%)
Black <i>n</i> = 42	21 (50%)	25 (60%)	6 (14%)	4 (10%)	18 (43%)	6 (14%)	3 (7%)
Total	266 (70%)	243 (64%)	72 (19%)	18 (5%)	110 (29%)	74 (20%)	33 (9%)
$\chi^2$	<b>9.74</b>	.46	2.14	4.50*	5.43	3.12	2.77*
	<b><i>p</i> = .008</b>	<i>p</i> = .79	<i>p</i> = .34	<i>p</i> = .10	<i>p</i> = .07	<i>p</i> = .21	<i>p</i> = .25

*\*test not valid due to low cell count*

Table 8. Readiness for Psychotherapy by Race

	Total RPI Range (7-68)	Disinterest Range (5-25)	Perseverance Range (5-25)	Openness Range (5-25)	Distress Range (5-25)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Black	37.30 (10.58)	13.36 (4.25)	17.59 (4.41)	16.48 (4.44)	16.49 (5.08)
White	41.41 (10.82)	11.90 (3.93)	17.94 (4.08)	16.82 (4.13)	18.68 (4.25)
Hispanic	41.93 (11.18)	12.16 (3.71)	18.87 (4.13)	17.36 (4.69)	18.09 (4.29)
Total	41.08 (10.93)	12.12 (3.93)	18.11 (4.14)	16.90 (4.29)	18.31 (4.39)

*Note.* RPI = Readiness for Psychotherapy Index

Table 9. Readiness for Psychotherapy by Race/Ethnicity

	<i>df</i>	<i>F</i>	<i>p</i>	partial $\eta^2$
No control				
Race	2, 362	3.08	.02	.02
Gender	1, 362	2.44	.12	.007
Race X Gender	2, 362	1.24	.29	.007
Control for Mood Disorder				
Race	2, 361	1.89	.15	.01
Gender	1, 361	.22	.64	.001
Race X Gender	2, 361	.79	.46	.004

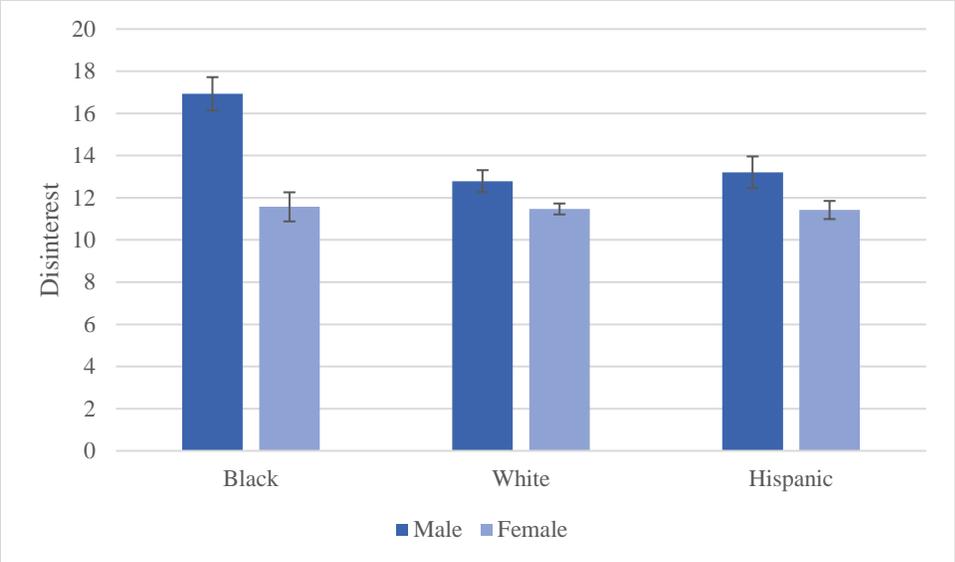


Figure 1. Disinterest scores by race and gender, controlling for Mood disorders.

**Study 2 Tables and Figures**

Table 10. Correlations Among Treatment Engagement Variables

	MPEQ Total	MPEQ Process	MPEQ Outcome	RPI Total	RPI Perseverance	RPI Openness
MPEQ Total	1	.97 ***	.91 ***	.58 ***	.57 ***	.43 ***
MPEQ Process		1	.80 ***	.52 ***	.51 ***	.39 ***
MPEQ Outcome			1	.56 ***	.56 ***	.40 ***
RPI Total				1	.89 ***	.84 ***
RPI Perseverance					1	.51 ***
RPI Openness						1

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 11. Demographic Differences in Treatment Engagement

	RPI		MPEQ	
	<i>t (df)</i>	<i>p</i>	<i>t (df)</i>	<i>p</i>
Gender	1.01 (247)	.31	-.74 (248)	.46
US Born	.10 (247)	.92	.53 (248)	.60
Parents US Born	-.42 (247)	.68	.71 (248)	.48
First Time College Student	-.33 (247)	.74	-.92 (248)	.36
Mental Health Diagnosis	1.04 (226)	.30	-.92 (226)	.36
Mental Health Treatment	.84 (243)	.40	-1.61 (243)	.11

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 12. Differences by Demographic Variables in ERI and Discrimination

	U.S. Born	Parents U.S. Born	Gender	First Gen College	Diagnosis	Treatment
MEIM	$t(247) = -3.25$ **	$t(247) = -6.60$ ***	$t(247) = .55$	$t(247) = 1.34$	$t(226) = -1.19$	$t(243) = -1.50$
MEIM Exploration	$t(247) = -3.27$ **	$t(247) = -6.68$ ***	$t(247) = .84$	$t(247) = .87$	$t(226) = -1.21$	$t(243) = -1.22$
MEIM Commitment	$t(247) = -2.75$ **	$t(247) = -5.47$ ***	$t(247) = .14$	$t(247) = 1.69$	$t(226) = -.99$	$t(243) = -1.62$
Public Regard	$t(247) = .30$	$t(247) = -5.37$ ***	$t(247) = -.04$	$t(247) = -3.73$ ***	$t(226) = .06$	$t(243) = -1.23$
Discrimination	$t(246) = -4.61$ ***	$t(246) = -6.29$ ***	$t(246) = -.47$	$t(246) = 4.10$ ***	$t(226) = .48$	$t(243) = 1.08$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Note. MEIM = Multigroup Ethnic Identity Measure

Table 13. Racial/Ethnic Group Means and Standard Deviations of ERI and Discrimination

	White	Asian	Black	Hispanic	Difference
Public Regard	32.55 (5.26) <sup>a</sup>	29.26 (5.93) <sup>b</sup>	18.78 (7.23) <sup>c</sup>	22.79 (6.91) <sup>d</sup>	$F(3, 245) = 54.50, p < .001$
MEIM	4.01 (1.41) <sup>a</sup>	5.37 (1.29) <sup>b</sup>	5.43 (1.10) <sup>b</sup>	5.35 (1.50) <sup>b</sup>	$F(3, 245) = 20.05, p < .001$
MEIM Exploration	11.07 (4.76) <sup>a</sup>	15.79 (4.42) <sup>b</sup>	16.22 (3.33) <sup>b</sup>	15.68 (5.24) <sup>b</sup>	$F(3, 245) = 21.38, p < .001$
MEIM Commitment	12.99 (4.40) <sup>a</sup>	16.42 (4.10) <sup>b</sup>	16.33 (4.16) <sup>b</sup>	16.44 (4.34) <sup>b</sup>	$F(3, 245) = 12.98, p < .001$
Discrimination	1.28 (.43) <sup>a</sup>	2.07 (.83) <sup>bc</sup>	2.65 (1.03) <sup>bd</sup>	1.98 (.82) <sup>bc</sup>	$F(3, 244) = 36.70, p < .001$

*Note.* Significant differences indicated by differences in letters in superscript, MEIM = Multi-group Ethnic Identity Measure

Table 14. Racial/Ethnic Group Means and Standard Deviations of Treatment Engagement Variables

	White	Asian	Black	Hispanic	Total
MPEQ	116.58 (19.56)	112.25 (20.71)	107.48 (22.33)	114.37 (18.54)	114.04 (20.04)
MPEQ Process	82.39 (12.94) <sup>a</sup>	78.64 (14.31) <sup>a</sup>	74.33 (14.77) <sup>b</sup>	80.74 (12.57) <sup>a</sup>	80.35 (13.52)
MPEQ Outcome	34.18 (7.41)	33.47 (7.69)	32.81 (8.76)	33.02 (7.74)	33.62 (7.67)
RPI	34.99 (6.14)	35.32 (5.30)	36.15 (4.39)	35.88 (6.60)	35.40 (5.88)
RPI Perseverance	18.72 (3.86)	18.70 (3.38)	19.52 (3.17)	19.51 (4.02)	18.98 (3.73)
RPI Openness	16.32 (3.31)	16.62 (2.60)	16.63 (2.39)	16.37 (3.26)	16.43 (3.06)

*Note.* Significant differences indicated by differences in letters in superscript, RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 15. Factorial ANOVAs Testing for Condition and Race/Ethnicity Differences in MPEQ and Subscales

	<i>df</i>	<i>F</i>	<i>p</i>	partial $\eta^2$
<b>Total MPEQ</b>				
Race/Ethnicity	3, 242	1.67	.18	.02
Condition	1, 242	.71	.40	.003
Race/Ethnicity * Condition	3, 242	1.36	.26	.02
<b>Process</b>				
Race/Ethnicity	3, 242	<b>2.92</b>	<b>.04</b>	<b>.04</b>
Condition	1, 242	.81	.37	.003
Race/Ethnicity * Condition	3, 242	1.63	.18	.02
<b>Outcome</b>				
Race/Ethnicity	3, 242	.41	.74	.005
Condition	1, 242	.76	.38	.003
Race/Ethnicity * Condition	3, 242	.83	.48	.01

*Note.* MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 16. Factorial ANOVAs Testing for Condition and Race/Ethnicity Differences in RPI and Subscales

	<i>df</i>	<i>F</i>	<i>p</i>	partial $\eta^2$
Total RPI				
Race/Ethnicity	3, 241	.41	.75	.005
Condition	1, 241	.00	.99	.00
Race/Ethnicity * Condition	3, 241	1.62	.19	.02
Perseverance				
Race/Ethnicity	3, 241	.81	.49	.01
Condition	1, 241	.34	.56	.001
Race/Ethnicity * Condition	3, 241	1.20	.31	.02
Openness				
Race/Ethnicity	3, 241	.16	.92	.002
Condition	1, 241	.47	.49	.002
Race/Ethnicity * Condition	3, 241	1.71	.17	.02

*Note.* RPI = Readiness for Psychotherapy Index.

Table 17. Correlations between ERI, Discrimination and Attitudinal Treatment Engagement

	MPEQ Total	MPEQ Process	MPEQ Outcome	RPI Total	RPI Perseverance	RPI Openness
MEIM	.19 **	.16*	.22**	.27***	.28***	.18**
MEIM Exploration	.14*	.10	.18**	.22***	.24***	.14*
MEIM Commitment	.22**	.20**	.23***	.28***	.28***	.20**
Discrimination	-.13*	-.17**	-.03	.09	.10	.04
Public Regard	.25***	.28***	.16*	.11	.08	.13*

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire, MEIM = Multi-group Ethnic Identity Measure, ERI = Ethnic-Racial Identity.

Table 18. Multiple Regression with MEIM, Public Regard, and Discrimination predicting RPI and MPEQ

	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>
RPI				
MEIM	1.05 (.25)	.27	<.001	.11
Public Regard	.16 (.05)	.22	.002	
Discrimination	.76 (.51)	.11	.14	
MPEQ				
MEIM	3.47 (.83)	.27	<.001	.12
Public Regard	.64 (.18)	.25	<.001	
Discrimination	-1.96 (1.72)	-.08	.25	

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire, MEIM = Multi-group Ethnic Identity Measure.

Table 19. Fit Statistics for Model with Public Regard predicting RPI and MPEQ

	$\chi^2$ square	CFI	NFI	RMSEA
baseline	(6) 7.46, $p = .28$	.99	.96	.03 [0, .09]
constrained	(12) 22.57, $p = .03$	.92	.87	.06 [.02, .10]
comparison	(6) 15.11, $p = .02$			

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 20. Fit Statistics for Model with Public Regard predicting RPI and MPEQ subscales

	$\chi^2$ square	CFI	NFI	RMSEA
baseline	(27) 38.18, $p = .08$	.98	.93	.04 [0, .07]
constrained	(38) 59.13, $p = .02$	.96	.90	.05 [.02, .07]
comparison	(11) 20.95, $p = .03$			

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 21. Beta weights from Model with Public Regard Predicting RPI and MPEQ total scores

	Outcome = RPI				Outcome = MPEQ			
	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>
Asian <i>n</i> = 54	<b>.31 (.11)</b>	<b>.35</b>	<b>.007</b>	<b>.13</b>	<b>1.29 (.42)*</b>	<b>.38</b>	<b>.002</b>	<b>.20</b>
Black <i>n</i> = 29	.04 (.13)	.06	.75	.006	<b>1.05 (.53)</b>	<b>.35</b>	<b>.047</b>	<b>.14</b>
Hispanic <i>n</i> = 59	.03 (.12)	.03	.51	.003	.59 (.34)	.22	.08	.09
White <i>n</i> = 122	.15 (.09)	.15	.11	.02	.02 (.30)	.007	.94	.02
Total	<b>.09 (.05)</b>	<b>.12</b>	<b>.06</b>	<b>.02</b>	<b>.63 (.16)</b>	<b>.24</b>	<b>&lt;.001</b>	<b>.06</b>

\* Relationship was greater for Asian group than White group (critical ratio = -2.85)

*Note.* RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

Table 22. Beta weights from Model with Public Regard Predicting RPI Subscales

	Outcome = RPI Openness				Outcome = RPI Perseverance			
	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>
Asian <i>n</i> = 54	.08 (.06)	.16	.23	.03	<b>.24 (.08)</b>	<b>.36</b>	<b>.004</b>	<b>.15</b>
Black <i>n</i> = 29	.02 (.08)	.05	.78	.004	.02 (.09)	.04	.84	.007
Hispanic <i>n</i> = 59	-.01 (.06)	-.03	.82	.004	.05 (.07)	.09	.51	.02
White <i>n</i> = 122	<b>.10 (.05)</b>	<b>.18</b>	<b>.04</b>	<b>.03</b>	.06 (.06)	.09	.31	.02
Total	<b>.05 (.02)</b>	<b>.14</b>	<b>.03</b>	<b>.02</b>	.04 (.03)	.08	.16	.01

*Note.* RPI = Readiness for Psychotherapy Index.

Table 23. Beta weights from Model with Public Regard Predicting MPEQ Subscales

	Outcome = MPEQ Process				Outcome = MPEQ Outcome			
	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>	<i>B (SE)</i>	$\beta$	<i>p</i>	<i>R</i> <sup>2</sup>
Asian <i>n</i> = 54	<b>.94 (.29)*</b>	<b>.40</b>	<b>&lt;.001</b>	<b>.22</b>	.28 (.19)	.20	.14	.07
Black <i>n</i> = 29	<b>.67 (.34)</b>	<b>.34</b>	<b>.049</b>	<b>.14</b>	.39 (.21)	.33	.06	.13
Hispanic <i>n</i> = 59	.48 (.25)	.24	.06	.10	.15 (.14)	.14	.28	.05
White <i>n</i> = 122	.04 (.19)	.19	.83	.03	-.06 (.11)	-.05	.61	.03
Total	<b>.48 (.10)</b>	<b>.28</b>	<b>&lt;.001</b>	<b>.08</b>	<b>.16 (.06)</b>	<b>.16</b>	<b>&lt;.001</b>	<b>.03</b>

\* Relationship was greater for Asian group in comparison to White group (critical ratio = -2.63)

Note. MPEQ = Milwaukee Psychotherapy Expectations Questionnaire.

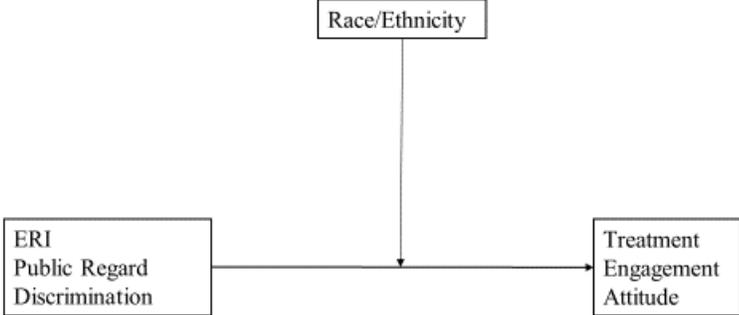


Figure 2. Conceptual model of moderation  
*Note.* ERI = Ethnic-Racial Identity

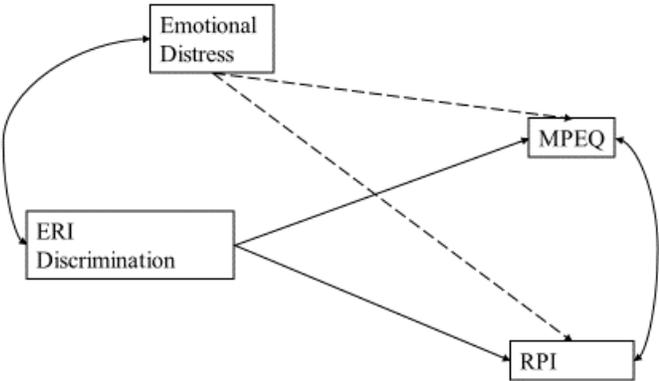


Figure 3. Model of ERI/Discrimination predicting MPEQ and RPI  
*Note.* Separate models were run with ERI and discrimination as predictors. Dashes indicate path was constrained equal across groups in both freely estimated and constrained model. RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire, ERI = Ethnic-Racial Identity.

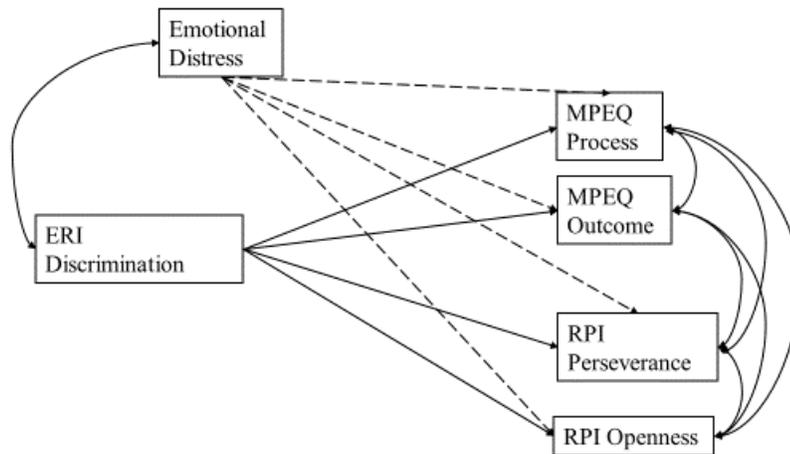


Figure 4. Model of ERI/Discrimination predicting MPEQ and RPI subscales

*Note.* Separate models were run with ERI and discrimination as predictors. Dashes indicate path was constrained equal across groups in both freely estimated and constrained model RPI = Readiness for Psychotherapy Index, MPEQ = Milwaukee Psychotherapy Expectations Questionnaire, ERI = Ethnic-Racial Identity.