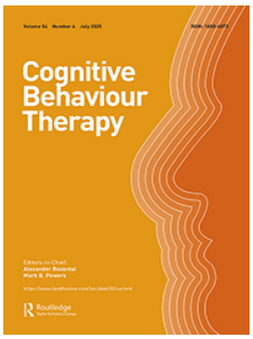

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Racial/ethnic identity moderates changes in skill use and therapeutic alliance but not anxiety or depression in the Unified Protocol

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ABSTRACT

Cognitive-behavioral therapy (CBT) patients with minoritized racial/ethnic backgrounds report similar outcomes as White patients but may report weaker alliances and less frequent CBT skill use. Given its transdiagnostic utility, we tested how racial/ethnic background impacted treatment outcomes, the alliance, and therapy skill use in the Unified Protocol (UP). Participants ($N = 70$, $M_{age} = 33.7$, 67% female, 74% White) with emotional disorders completed six sessions of core UP modules. Participants rated their past-week anxiety, depression, and skill use before each session and the strength of the alliance after each session. We tested whether racial/ethnic background moderated the slopes of symptom change, alliance, and skill use. White patients reported marginally steeper reductions in anxiety than patients with minoritized identities, $B = .27$, $p = .08$, but similar improvements in depression and overall alliance, $ps > .10$. However, White patients reported steeper increases in agreement on the tasks of therapy, $B = -.31$, $p = .047$, and skill use, $B = .36$, $p = .02$. Patients with minoritized identities may achieve similar reductions in anxiety and depression as White patients despite smaller increases in therapy task agreement and skill use. Clinicians working with patients with minoritized identities may prioritize these two constructs.

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Unified protocol; disparities; anxiety; alliance; skills

Emotional disorders, such as anxiety and depressive disorders, are characterized by frequent and intense negative emotions combined with aversive, avoidant reactions to those emotions (Bullis et al., 2019). These disorders are relatively common, with 12.6% of adults meeting criteria for an anxiety disorder and 8.3% of adults meeting criteria for a mood disorder in any given year (Kessler et al., 2005). However, these mean percentages obscure important differences in the prevalence of psychopathology among people who hold different racial and ethnic

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identities. For instance, estimates suggest that approximately 13.8% of people who identify as White meet criteria for an anxiety disorder in a given year, compared to 10.8% of African Americans, 9.6% of Latinos, and 6.0% of Asian Americans (Chen et al., 2019). Similarly, estimates suggest that 8.9% of people who identify as White meet criteria for a mood disorder each year, compared to 5.9% of African Americans, 8.8% of Latinos, and 4.8% of Asian Americans (Chen et al., 2019). The disparities in these prevalence rates likely result from a multitude of factors, including individual differences, differential presentations of disorders, biases involved in diagnoses, likelihood to seek treatment, and differential exposure to social and environmental stressors (Bailey et al., 2019; Weber et al., 2018; D. R. Williams et al., 2007).

Cognitive-behavior therapies (CBTs) are an efficacious class of evidence-based treatments for emotional disorders (Carpenter et al., 2018; Cristea et al., 2017; Cuijpers et al., 2016; Springer et al., 2018). There is no consistent evidence to our knowledge that racial or ethnic identities moderate the efficacy of CBT (Carter et al., 2012; Ince et al., 2014), although there is some evidence that CBT may be less efficacious for post-traumatic stress disorder (PTSD) and substance use disorders among people who hold minoritized identities compared to those who identify as White (Carter et al., 2012; Windsor et al., 2015). Despite limited differences in CBT outcomes as a function of racial or ethnic identity, there is emerging evidence that CBT may be delivered in somewhat different ways or act on somewhat different processes of change for people who hold different racial or ethnic identities (Ezawa & Strunk, 2022a, 2022b; Pina et al., 2003).

Several processes of change are thought to be activated in CBTs. Two of the most well-researched processes include the therapeutic alliance and engagement in cognitive and behavioral skills taught in treatment (Cameron et al., 2018; Martin et al., 2000). The therapeutic alliance may be defined as a collaborative working relationship between therapist and patient (Hatcher & Barends, 1996). Horvath et al. (2011) argue that the alliance encompasses three aspects: goal alliance, task alliance, and therapeutic bond. Goal alliance indicates agreement between therapist and patient on the goals of treatment. Task alliance indicates agreement between therapist and patient on how therapy tasks are being used to meet the therapeutic goals. Therapeutic bond refers to the personal relationship between the therapist and patient with an emphasis on mutual respect and liking (Bordin, 1979).

Overall, the alliance has been shown to have a medium-sized association with treatment outcomes (Flückiger et al., 2018). Specifically, patients reporting a relatively stronger alliance demonstrate significantly more symptom improvement than those who report a weaker alliance (Horvath et al., 2011; Nordgren et al., 2013; Slone & Owen, 2015). The therapeutic alliance has also been shown to differ between racial and ethnic groups. For instance, therapeutic dyads consisting of patients of color with White therapists tend to report significantly weaker alliances than White-White dyads (Constantine, 2007; Owen et al., 2014). These weaker alliance ratings may result from minoritized patients' tendency to prefer therapists of their same racial or ethnic identity (Chang & Yoon, 2011; Gregory & Leslie, 1996). Reasons cited for these preferences included concerns that mismatched therapists may lack cultural knowledge and understanding of a patient's experience as a member of a minoritized group, leading patients to feel unable to talk about racial or cultural issues (Chang & Yoon, 2011).

Whereas the alliance is a common factor thought to be present in all psychotherapy treatments, use of the skills taught in CBTs have been proposed as a mechanism unique to this school of psychotherapy (Hawley et al., 2017). CBT skills can include a range of strategies that patients practice for homework within and between therapy sessions. In CBTs for emotional disorders, these skills commonly include cognitive restructuring, situational or interoceptive exposure, and mindfulness (Barlow & Craske, 2022; Hope et al., 2019; Orsillo & Roemer, 2011). More frequent use of CBT skills is associated with greater improvements in anxiety and depressive symptoms in inpatient (Radkovsky et al., 2014; Webb et al., 2016; Wirtz et al., 2014) and outpatient (Neacsiu et al., 2010; Southward & Sauer-Zavala, 2022) samples of people with a range of emotional disorders (cf. Uliaszek et al., 2018; Wilks et al., 2016).

Similarly, more effective and skillful application of CBT skills are associated with decreases in depression and anxiety in outpatient samples (see Southward et al., 2021 for a review). Skillful application of CBT skills, or skillfulness, has been operationalized as consisting of four dimensions: skill knowledge, frequency of use, quality, and effectiveness (Southward & Sauer-Zavala, 2022). Skill knowledge refers to how well patients understand the skills taught by their therapist. Frequency of use refers to how often patients use these skills when needed in response to stressful situations. Quality refers to how well patients use these skills in line with how they were taught (i.e. the degree to which the patient's implementation of a skill aligned with how their therapist taught them to use it), and effectiveness refers to how well the skills work to help patients achieve their goals (e.g. reducing anxiety or depression). Thus, being more skillful includes a fuller or more comprehensive understanding of skills, using them as often as necessary in response to stressors, implementing them as instructed by one's therapist, and achieving one's goals with them.

There is fairly limited and mixed evidence regarding how frequency and skillfulness of CBT skill use varies among people who hold different racial and ethnic identities. For instance, White patients in dialectical behavior therapy (DBT) and DBT skills groups reported using skills as frequently as patients who hold minoritized identities (Southward et al., 2022, 2023). However, in transdiagnostic CBT, White patients reported using cognitive skills specifically more frequently than patients who hold minoritized identities (Southward & Sauer-Zavala, 2022). These differences may reflect variability in the degree to which therapists emphasize cognitive skills (Ezawa & Strunk, 2022a, 2022b), given that cognitive restructuring can feel invalidating when applied to experiences of prejudice (M. T. Williams et al., 2022).

Most research on CBTs for emotional disorders has primarily relied on protocols designed for specific disorders. However, burgeoning research suggests that emotional disorders share several core maintaining factors (e.g. neuroticism, experiential avoidance; Barlow et al., 2014; Bullis et al., 2019; Sauer-Zavala, Southward, Semcho, et al., 2022). As such, researchers have increasingly explored the utility of transdiagnostic treatments for these conditions (Hofmann & Hayes, 2019). One such transdiagnostic treatment is the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (UP; Barlow et al., 2018). The UP contains five core modules drawn from disorder-specific CBTs to target the core components of emotional disorders: understanding and tracking emotional responses, mindful emotion awareness, cognitive flexibility, countering

behavioral emotion avoidance and emotion-focused exposures, and increasing tolerance of emotion-related physical sensations (Barlow et al., 2017). The UP led to increased use of adaptive CBT skills (Sakiris & Berle, 2019), significant reductions in anxiety and depressive symptoms, and is non-inferior compared to disorder-specific CBTs (Barlow et al., 2017). The UP has also shown promise among people from many different racial and ethnic identities (Cassiello-Robbins et al., 2020).

Both the therapeutic alliance and skill use may be active mechanisms of change in the UP. The alliance has mediated the effect of initial treatment expectancies on changes in anxiety across treatment with the UP (Sauer-Zavala et al., 2018). More frequent skill use during the UP may also predict decreases in psychopathology (Southward & Sauer-Zavala, 2022), especially among people who engaged in more frequent maladaptive behaviors at baseline (Conklin et al., 2015). Importantly, the alliance, specifically agreement on the tasks of therapy, has been shown to predict session-to-session improvements in UP skillfulness, which then predicts session-to-session improvements in anxiety and depression (Fruhbauerova et al., 2024). Together, these results suggest that both the alliance and the skillfulness with which patients apply UP skills are active mechanisms of the UP.

Current study

In brief, results of the research to date suggests CBTs for the majority of conditions lead to similar outcomes regardless of patients' racial/ethnic identities. However, patients of color may report weaker alliances and less frequent use of therapy skills when matched with a White therapist than White patients matched with a White therapist. Because these results are somewhat mixed and each come from different studies, in the current secondary analysis, we aimed to explore the impact of patients' racial/ethnic identity on both processes and outcomes of transdiagnostic CBT in a single sample. In the current study, we tested if participants' racial or ethnic identities moderated (1) changes in anxiety and depression, (2) changes in the working alliance, and (3) changes in skillfulness during treatment with the UP for emotional disorders.

Transparency and openness

Although the analyses in the parent study were preregistered (#NCT04584879), the analyses in the current study were not preregistered. Data, materials, and code are available at https://doi.org/10.17605/osf.io/74mhu. We do not report how we determined our sample size because this study involved an analysis of existing data rather than new data collection, although we do report a power analysis to assess the smallest effect sizes we were powered to detect. We report how we determined all data exclusions, manipulations, and measures in the study below. The study was approved by the local Institutional Review Board, all participants provided informed consent before engaging in any study procedures, and study procedures were carried out in accordance with the provisions of the World Medical Association Declaration of Helsinki (6th Revision).

Materials and methods

Participants

The intent-to-treat sample consisted of 70 treatment-seeking individuals, with a mean age of 33.7 years (*SD* = 12.6; range: 19–63). Most of the sample (67.1%; *n* = 47) identified as female, with 31.4% (*n* = 22) identifying as male, and 1.4% (*n* = 1) identifying as non-binary. The majority of participants identified as White (74.3%; *n* = 52), with 12.9% (*n* = 9) identifying as African or African-American, 4.3% (*n* = 3) identifying as East Asian, 2.9% (*n* = 2) identifying as Latinx, 2.9% (*n* = 2) identifying as South Asian, and 2.9% (*n* = 2) identifying as Arab-American or Middle Eastern. Participants reported a median household income of $50,000–$99,999. Nearly half (47.1%; *n* = 33) of participants met criteria for a primary diagnosis of generalized anxiety disorder (GAD), followed by major depressive disorder (MDD; 27.1%; *n* = 19), social anxiety disorder (SAD; 22.9%; *n* = 16), persistent depressive disorder (PDD; 17.1%; *n* = 12), obsessive compulsive disorder (OCD; 7.1%; *n* = 5), panic disorder (PD; 5.7%; *n* = 4), PTSD (4.3%; *n* = 3), agoraphobia (AG; 1.4%; *n* = 1), and acute stress disorder (ASD; 1.4%; *n* = 1).

Potential participants were included in the study if they met Diagnostic and Statistical Manual-5 (*DSM-5*; American Psychiatric Association, 2013) criteria for at least one of the anxiety, depressive, or trauma-related disorders above, were at least 18 years of age, and resided in Kentucky at the time of the study. Potential participants were excluded if they received at least five sessions of CBT in the past five years, ever experienced a manic episode, met *DSM-5* criteria for a substance use disorder that would require more intensive treatment than outpatient psychotherapy, or had a history of delusions or hallucinations. Participants were also excluded if they were unwilling to either pause current treatment with another psychotherapist or alert the study team to changes in any psychotropic medication they had been prescribed.

Study treatment

The study treatment consisted of up to five core modules of the Unified Protocol (UP; Barlow et al., 2018) delivered in individual face-to-face or virtual telehealth sessions. Each module, except Countering Emotional Behaviors, consisted of two 50–60 minute sessions delivered once per week. The Countering Emotional Behaviors module consisted of four 50–60 minute sessions delivered once per week. The five core modules of the UP are designed to teach participants about the adaptive nature of emotions and to practice self-monitoring (Understanding Emotions module); nonjudgmental present-moment awareness (Mindful Emotion Awareness module); flexibility in reappraising negative automatic thoughts (Cognitive Flexibility module); alternative behaviors to challenge urges to engage in avoidant behaviors (Countering Emotional Behaviors module); and how to approach and tolerate uncomfortable physiological sensations (Confronting Physical Sensations module).

Therapists and assessors

Therapists for this study included a licensed psychologist, a postdoctoral fellow, and two advanced clinical psychology doctoral students (two men, two women; three who identified as White and one who identified as Asian-American), each of whom was

certified in the delivery of the UP. The doctoral students and postdoctoral fellow met weekly with the licensed therapist for supervision and demonstrated good adherence (Sauer-Zavala, Southward, Stumpp, et al., 2022). The assessors included one doctoral student and one post-baccalaureate research assistant, both of whom were certified in the Diagnostic Interview for Anxiety, Mood, and Obsessive-Compulsive and Related Neuropsychiatric Disorders (Springer et al., 2018). Assessors demonstrated excellent interrater reliability (Krippendorff's αs: .91–1.00; median = 1.00; Sauer-Zavala, Southward, Stumpp, et al., 2022).[1]

Materials

Demographics

Participants self-reported their demographic information via an online survey. Participants provided their age in years. They selected the gender identity/identities with which they most identified. Participants reported all applicable racial or ethnic identities they held. Participants selected the sexual orientation(s) with which they most identified and current marital status. Socioeconomic status was measured by selecting the appropriate range of participants' estimated family income and highest level of education completed.

Dimensions of skillfulness and use scale

The Dimensions of Skillfulness and Use Scale (DSUS; Southward & Sauer-Zavala, 2022) is a 4-item self-report measure with each item designed to assess an aspect of skill use: knowledge or understanding about skills learned in the previous session, frequency of skill use, quality (i.e. how well skills were implemented in line with how they were taught regardless of the outcome), and effectiveness (i.e. how well the skill led to desired outcomes). Items were rated from 0 (*not at all*/*never*) to 4 (*extremely*/*every day*) and summed to create a total score. In the current sample, DSUS items demonstrated acceptable-to-good internal consistency across sessions 2–7 (McDonald's ωs: .76–.86).

Overall anxiety severity and impairment scale

The Overall Anxiety Severity and Impairment Scale (OASIS; Norman et al., 2006) is a 5-item self-report measure designed to assess the severity of and impairment from anxiety symptoms over the past week. Each item assesses one of the following: frequency of anxiety, intensity of anxiety, impairment in work or school, impairment in social relationships, and behavioral avoidance due to anxiety. Items were rated from 0 to 4 with unique anchors for each item and summed to create a total score. In the current sample, OASIS items demonstrated acceptable-to-good internal consistency across the first seven sessions (ωs: .79–.88).

Overall depression severity and impairment scale

The Overall Depression Severity and Impairment Scale (ODSIS; Bentley et al., 2014) is a 5-item self-report measure designed to assess the severity of depressive symptoms over the past week. Each item assesses one of the following: frequency of depression, intensity of depression, impairment in work or school, impairment in social relationships, and behavioral avoidance due to depression. Items are rated

from 0 to 4 with unique anchors for each item and summed to create a total score. In the current sample, ODSIS items demonstrated excellent internal consistency across the first seven sessions (ωs: .92–.95).

Working alliance inventory – short revised

The Working Alliance Inventory—Short Revised (WAI-SR; Hatcher & Gillaspy, 2006) is a 12-item self-report measure designed to assess patients' perceptions of the therapeutic alliance. The scale is adapted from the original Working Alliance Inventory and provides both a total score and three subscales reflecting each individual component of the alliance (i.e. task alliance, goal alliance, and bond; Horvath & Greenberg, 1989). Items are rated from 1 (*seldom*) to 5 (*always*) and summed to create a total score. In the current sample, WAI-SR items demonstrated excellent internal consistency across the first six sessions (ωs: .91–.95).

Procedure

Recruitment and study flow

Participants were recruited through social media (e.g. Reddit, Facebook), research participation websites (e.g. ResearchMatch, CenterWatch), and physical flyers. Potential participants completed an initial phone screen to determine likely eligibility. Those deemed likely eligible completed a baseline assessment to determine the presence of the *DSM-5* diagnoses above, confirm their eligibility, and collect demographic information. Informed consent was gathered prior to participants engaging in any research activities. All study procedures were approved by the local university Institutional Review Board.

The parent study was a sequential multiple assignment randomized trial that included two randomizations. In the first-stage randomization, participants were randomized to receive UP modules in one of three sequences: (1) prioritizing modules to capitalize on participants' baseline strengths (34.3%; $n = 24$), (2) prioritizing modules to compensate for participants' baseline deficits (30.0%; $n = 21$), or (3) the standard order as described by Barlow et al. (2018; 35.7%; $n = 25$). The second-stage randomization occurred between sessions 5 and 6. Here, participants were randomized to either discontinue treatment after session 6 (50.0%; $n = 35$) or continue treatment until they had received all core UP modules (i.e., 12 sessions total; 50.0%; $n = 35$).

Participants completed measures of anxiety, depression, and skillfulness over the prior week no more than 24 hours prior to the start of each session using a Research Electronic Data Capture (REDCap; Harris et al., 2009, 2019) link sent to them by their therapist. Because participants had not learned any skills prior to the first session, they did not complete the DSUS at this time point. After each session, participants rated the working alliance via a separate REDCap link sent by their therapist.

Data analytic method

We first compared descriptive statistics of our variables of interest between participants who identified as White and those who identified as a person of color due to the relatively small number of participants who identified with specific non-White racial/ethnic

identities. We determined White participants to be those who only endorsed the racial/ethnic identity of "White/Caucasian" and no other identities; all other participants were considered to hold minoritized racial or ethnic identities. We used *t*-tests to compare groups on continuous outcomes (i.e., age, baseline OASIS and ODSIS scores), a chi-squared test to compare groups on the dichotomous outcome (i.e., gender), and Mann-Whitney U tests to compare groups on ordinal outcomes (i.e., education, income).

We then used hierarchical linear modeling (HLM) to test our primary hypotheses that participant racial/ethnic identity would moderate changes in the alliance, skill use, and symptoms over the first six sessions with *proc mixed* in SAS Version 9.4. We regressed each outcome, in separate models, on session number, dummy-coded racial/ethnic identity (0 = White, 1 = person of color), and the product of session number and racial/ethnic identity. We included fixed effects dummy-coded indicator variables, rather than random effects, to represent skill sequencing condition (i.e. strengths, deficits, or standard) and therapist as simulations have shown that modeling fewer than 10 clusters using fixed effects methods leads to consistently less biased parameter estimates in multilevel models than using random effects (McNeish & Stapleton, 2016). We included random intercepts and slopes in all models and used the Kenward-Roger method to calculate denominator degrees of freedom. We focused on the first-stage randomization window (i.e., the first six sessions) because all participants were engaged in treatment during this period and because previous researchers have shown that the majority of symptom change in the UP occurs during the first six sessions (Sauer-Zavala, Southward, Stumpp, et al., 2022).[2] Results of HLMs with maximum likelihood estimation "can be interpreted as if no missing data were present under the assumption that the data are missing at random" (Raudenbush & Bryk, 2002). We believe the assumption of missing at random is appropriate because each of our primary outcomes was significantly explained by participants' average WAI scores, *B*s: −.04 - −.02, *p*s < .04, and we had relatively little missing data (13–26%, depending on the measure). We had 80% power to detect effects of $R^2 \geq .10$ (Murayama et al., 2022). All code is available at https://doi.org/10.17605/osf.io/74mhu.

Results

Demographic and baseline comparisons

White participants and participants of color did not significantly differ on any demographic characteristics (Table 1). Therefore, we did not include any of these variables in

Table 1. Descriptive statistics and baseline comparisons between white participants and participants of color.

Variable	White *M* (*SD*)/*n* (%)	Participants of Color *M* (*SD*)/*n* (%)	$t/\chi^2/Z$	*df*	*p*
Age (years)	34.7 (12.9)	31.4 (11.5)	.99	66	.33
Gender (female)	29 (43.3%)	16 (23.9%)	2.13	1	.14
Education	Associate's degree	Associate's degree	−.61		.54
Income	$75,000–$99,999	$75,000–$99,999	.01		.99
OASIS	9.29 (3.74)	8.76 (3.56)	.55	66	.59
ODSIS	8.23 (5.39)	8.38 (4.30)	−.11	66	.91

OASIS = Overall Anxiety Severity and Impairment Scale. ODSIS = Overall Depression Severity and Impairment Scale.

Table 2. Treatment outcomes by session and racial/ethnic identity.

Variable	Session 1 *M* (*SD*)	Session 2 *M* (*SD*)	Session 3 *M* (*SD*)	Session 4 *M* (*SD*)	Session 5 *M* (*SD*)	Session 6 *M* (*SD*)	Session 7 *M* (*SD*)
OASIS							
a. White	8.48 (3.67)	8.22 (3.52)	7.64 (3.70)	7.25 (3.17)	6.70 (3.12)	6.70 (3.47)	6.40 (3.74)
b. Patients of color	8.65 (3.27)	7.56 (2.92)	8.71 (3.51)	9.13 (3.72)	8.00 (2.80)	8.20 (3.76)	6.93 (3.04)
ODSIS							
a. White	7.31 (4.96)	6.93 (4.66)	6.73 (4.96)	6.00 (4.20)	5.93 (4.96)	4.89 (4.73)	4.65 (4.37)
b. Patients of color	7.90 (4.42)	6.11 (4.42)	5.59 (3.78)	5.75 (3.53)	5.60 (3.40)	5.47 (3.89)	5.60 (3.27)
WAI-SR Total							
a. White	48.04 (8.66)	51.40 (7.18)	52.42 (6.40)	53.35 (5.98)	55.28 (4.38)	55.15 (5.49)	55.58 (5.15)
b. Patients of color	46.56 (7.96)	50.67 (6.90)	48.80 (10.41)	49.69 (7.58)	52.23 (6.37)	49.80 (9.78)	49.75 (8.97)
DSUS							
a. White	–	7.40 (2.73)	7.45 (2.86)	7.34 (3.12)	7.91 (2.82)	8.37 (2.83)	8.03 (3.14)
b. Patients of color	–	7.44 (2.38)	6.53 (2.32)	7.19 (2.01)	7.13 (3.00)	7.07 (2.60)	6.20 (2.34)

OASIS = Overall Anxiety Severity and Impairment Scale. ODSIS = Overall Depression Severity and Impairment Scale. WAI-SR Total = Working Alliance Inventory—Self Report total score. DSUS = Dimensions of Skillfulness and Use Scale. OASIS, ODSIS, and DSUS administered before each session. WAI-SR administered after each session.

the remaining analyses. Participants also did not significantly differ in the severity of anxiety or depressive symptoms at the start of session 1 (Table 1).

Racial and ethnic identities moderating early changes in treatment

Anxiety significantly decreased among White participants, $B = -.37$, $SE = .67$, $p < .01$, 95% CI [−.52, −.22], but not among participants of color, $B = -.10$, $SE = .13$, $p = .43$, 95% CI [−.36, .15], across the first six sessions (Table 2). However, racial/ethnic identity did not significantly moderate the rate of anxiety change, $B = .27$, $SE = .15$, $p = .08$, 95% CI [−.03, .56], $R^2 = .03$ (Table S1). Depression significantly decreased for both White participants, $B = -.43$, $SE = .10$, $p < .01$, 95% CI [−.62, −.24] and participants of color, $B = -.41$, $SE = .16$, $p = .01$, 95% CI [−.72, −.09], across the first six sessions, and racial/ethnic identity also did not significantly moderate this rate of change, $B = .03$, $SE = .19$, $p = .89$, 95% CI [−.34, .40], $R^2 < .01$ (Table S2).

The strength of the overall therapeutic alliance increased among both White participants, $B = 1.40$, $SE = .19$, $p < .01$, 95% CI [1.02, 1.78], and participants of color, $B = .86$, $SE = .31$, $p = .01$, 95% CI [.23, 1.48], across the first six sessions (Table 2), and racial/ethnic identity did not significantly moderate this rate of change, $B = -.54$, $SE = .37$, $p = .14$, 95% CI [−1.27, .19], $R^2 = .02$. The strength of the overall therapeutic alliance increased among both White participants, $B = 1.40$, $SE = .19$, $p < .01$, 95% CI [1.02, 1.78], and participants of color, $B = .86$, $SE = .31$, $p = .01$, 95% CI [.23, 1.48], across the first six sessions, and racial/ethnic identity did not significantly moderate this rate of change, $B = -.54$, $SE = .37$, $p = .14$, 95% CI [−1.27, .19], $R^2 = .02$. Similarly, the strength of the therapeutic bond increased across treatment among both White participants, $B = .42$, $SE = .07$, $p < .01$, 95% CI [.28, .56], and participants of color, $B = .30$, $SE = .11$, $p = .01$, 95% CI [.07, .52], across the first six

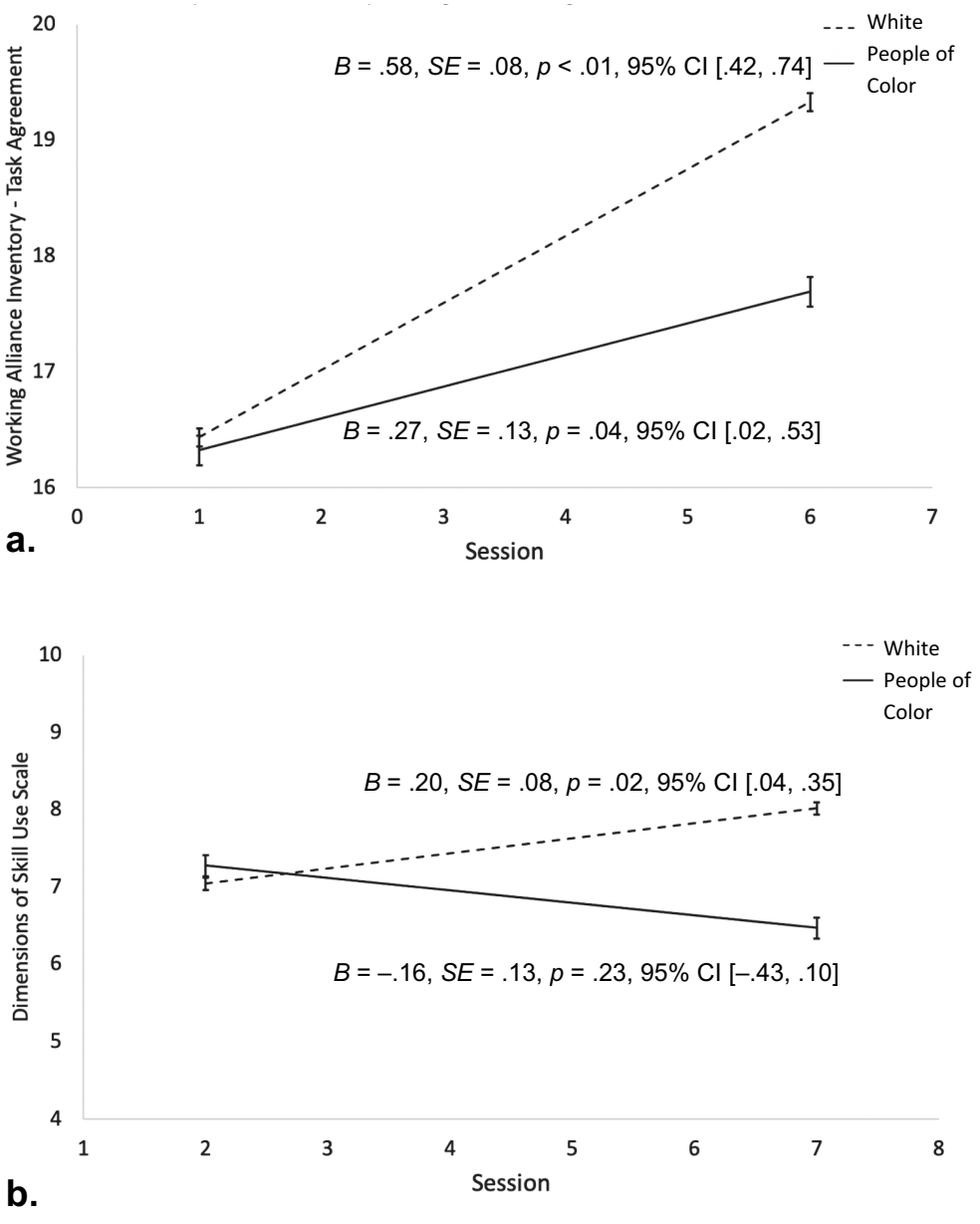

Figure 1. Racial/ethnic identity moderates early change in task agreement.

sessions and did not significantly differ between groups, $B = -.12$, $SE = .13$, $p = .37$, 95% CI [−.38, .14], $R^2 = .01$. Agreement on goals also increased across treatment among both White participants, $B = .40$, $SE = .07$, $p < .01$, 95% CI [.25, .55], and participants of color, $B = .26$, $SE = .12$, $p = .04$, 95% CI [.01, .50], across the first six sessions and did not significantly differ between groups, $B = -.15$, $SE = .14$, $p = .31$, 95% CI [−.44, .14], $R^2 = .01$. However, racial/ethnic identity did significantly moderate the rate of change in agreement on tasks, $B = -.31$, $SE = .15$, $p = .047$, 95% CI [−.61, −.005], $R^2 = .05$

(Figure 1(a)). Specifically, agreement on tasks increased at a greater rate for White participants, $B = .58$, $SE = .08$, $p < .01$, 95% CI [.42, .74], than participants of color, $B = .27$, $SE = .13$, $p = .04$, 95% CI [.02, .53], across the first six sessions (Tables S3, S4, S6).

Racial/ethnic identity also significantly moderated the rate of change in skillfulness, $B = .36$, $SE = .16$, $p = .02$, 95% CI [.05, .67], $R^2 = .04$ (Figure 1(b)). Skillfulness significantly increased among White participants, $B = .20$, $SE = .08$, $p = .02$, 95% CI [.04, .35], but did not significantly change among participants of color, $B = -.16$, $SE = .13$, $p = .23$, 95% CI [−.43, .10], across the first six sessions (Tables 2, S7).

Discussion

In the current study, we examined the effects of racial and ethnic identity on therapeutic processes and outcomes in adults with emotional disorders being treated with the UP. We tested if participants' racial or ethnic identities moderated changes in anxiety and depression, the alliance, and skillfulness across the first six sessions of the UP. We found that White participants demonstrated a significant reduction in anxiety whereas participants of color did not, although the difference between these slopes was only trending toward statistical significance. Conversely, White participants and participants of color demonstrated similar reductions in depression. Overall therapeutic alliance, strength of the therapeutic bond, and agreement on goals increased similarly for both White participants and participants of color. By contrast, agreement on tasks increased more quickly among White participants. Finally, White participants also reported significant increases in skillfulness across early UP sessions, whereas skillfulness did not significantly change among participants of color.

Consistent with previous literature, we found no differences in the rate of change in depression symptoms between White participants and participants of color (Schraufnagel et al., 2006). By contrast, White participants reported a significant decrease in anxiety symptoms, whereas participants of color reported a non-significant decrease and the difference in these slopes was marginally significant. These results suggest that the UP may lead to largely consistent decreases in depression, regardless of patients' racial or ethnic identities. However, the UP may lead to somewhat greater reductions in anxiety among White patients than patients of color. Although non-significant, this marginal difference may have resulted from participants of color primarily working with White therapists. Chang and Yoon (2011) suggest that patients of color may feel that White therapists are unable to appreciate their marginalized status and culture, leading them to conceal aspects of their identity for fear of experiencing discriminatory or oppressive treatment by the therapist. However, given the novelty of this finding and the lack of statistical significance, we encourage future researchers to replicate it in a larger patient sample with more diverse therapists to evaluate these comparisons more directly.

Alternatively, these potential differences in symptom change may have resulted from differences in the strength of the alliance or participants' UP skill use, both of which may have also been influenced by differences between White therapist-White patient dyads and White therapist-patient of color dyads. Whereas all participants demonstrated similar increases in the strength of the bond with their therapist and alliance on the goals of treatment, White participants reported greater increases in agreement on the

tasks of therapy than participants of color. White participants also reported greater increases in UP skillfulness than participants of color. This is particularly important given that a primary tasks of therapy in the UP involve skill use. Together, these results suggest that patients in the UP tend to experience similarly strong bonds with their therapist and agreement on the overall aims of treatment, regardless of their racial or ethnic identity. However, White participants may report relatively more agreement about the utility or implementation of UP skills and thus be able to implement them more skillfully. If patients of color are minimizing aspects of their experiences when working with White therapists or if White therapists are not teaching skills in a way that is as applicable to patients of color, this could lead to a misunderstanding between patients of color and White therapists about the utility of these skills, leading to this lack of agreement on the tasks of therapy (Chang & Yoon, 2011).

Given that skillfulness has mediated the effect of task agreement on changes in anxiety and depression in the UP (Fruhbauerova et al., 2024), it is noteworthy that minoritized patients reported smaller improvements in both process constructs across treatment than White patients, which led to non-significantly smaller reductions in anxiety. The UP has most frequently been studied with patients who identified as White and female (Cassiello-Robbins et al., 2020). These results suggest that the way skills are introduced and implemented in the UP may need to be adapted to the needs and preferences of people who hold marginalized racial or ethnic identities. It is possible that framing these skills in the context of a minority stress model for participants of color may lead to greater agreement on and implementation of these skills (Brownlow, 2023; Pachankis, 2015). Using a minority stress frame or otherwise adapting the delivery of skills may be particularly useful for White therapists when working with patients of color, whereas it is unclear from our results if these adaptations would be as necessary for therapists of color working with patients of color who may be incorporating such adaptations or framings more naturalistically in this context. However, because White patients and patients of color did not differ significantly in symptom severity at baseline, it is unlikely that these differences in skillfulness resulted from patients of color experiencing more severe symptoms.

These findings should be considered in light of the limitations of this study. We recruited a relatively small sample composed of a larger proportion of White participants than participants of color, limiting our power to detect small between-group effects. Further, due to the imbalance in racial/ethnic representation, we dichotomized participants' racial and ethnic identities into White participants and participants of color to maximize power although doing so obscures potentially meaningful differences among participants of color. We encourage future researchers to oversample participants of color to adequately power comparisons among people with a variety of racial and ethnic identities. Similarly, 75% of our therapists identified as White. Although consistent with the demographics of psychologists in the U.S (Hamp et al., 2016). this distribution precluded us from comparing patient-therapist dyads with therapists of color. We encourage future researchers to prioritize diversity in the selection of study therapists to be adequately powered to test these comparisons as well. Finally, by focusing on the first six sessions of treatment, we were able to maximize our statistical power to study a particularly impactful time period in therapy, although our results do not necessarily generalize to longer courses of care.

Although the trend of our results suggests the effects found in the first six sessions would be larger over longer courses of care, it is also possible that patients of all racial/ethnic identities would regress back to the mean over time. We encourage future researchers to directly compare these effects in the early stages of longer courses of care to the later stages of longer courses of care.

Despite these limitations, we were able to replicate and extend previous research on variability in treatment processes and outcome in CBT by patient racial and ethnic identity. Our findings regarding similar changes in depression, therapeutic bond, and agreement on goals between people holding White and racial/ethnic minority identities highlight areas of cross-cultural generalizability within the UP. Our findings regarding potential differences in changes in anxiety, agreement on tasks, and skillfulness point to aspects of the treatment that may benefit from further cultural refinement and adaptation. We encourage future treatment developers to directly solicit input from people from a variety of identities regarding their needs and preferences in treatment and incorporate these insights to enhance the efficacy and generalizability of CBTs more broadly.

Notes

1. Krippendorff (2004) labeled αs ≥ .80 as indicating reliable variables and αs between .67–.80 as indicating tentative reliability.
2. In this dataset, roughly 55.4% of overall changes in skillfulness ($DSUS_{session\ 12} - DSUS_{session\ 2} = 1.12$) had occurred by session 6 ($DSUS_{session\ 6} - DSUS_{session\ 2} = .62$), and roughly 64.2% of overall changes in the working alliance ($WAI_{session\ 12} - WAI_{session\ 1} = 9.42$) had occurred by session 6 ($WAI_{session\ 6} - WAI_{session\ 2} = 6.05$).

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