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RESEARCH ARTICLE

An investigation of mental health inequalities related to race and ethnicity in psychological therapy services

SAIQA NAZ [1], DAVID SAXON[2], & JAIME DELGADILLO [3]

[1]*Department of Experimental Psychology, University of Oxford, Oxford Health NHS Foundation Trust, Oxford, United Kingdom;* [2]*Clinical and Applied Psychology Unit, School of Psychology, University of Sheffield, United Kingdom &* [3]*Institute of Psychiatry, Psychology & Neuroscience, King's College London, United Kingdom*

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Abstract
Objective: Prior evidence suggests that people from racial/ethnic minority (REM) groups experience greater psychological distress, especially if they are isolated from their cultural ingroup. This study examined associations between REM status and psychological symptoms measured before and after therapy, as well as interactions with neighbourhood-level REM density.
Method: Electronic health records from 130,857 patients who accessed psychological interventions in primary care services in England were analyzed. Pre- and post-treatment depression (PHQ-9), anxiety (GAD-7) and functional impairment measures (WSAS) were linked to individual-level and neighbourhood-level demographic and socioeconomic data. Multilevel (mixed effect) models were used to examine associations between individual and neighbourhood socioeconomic variables with available measures of psychological distress.
Results: Specific (rather than all) REM groups had higher indices of psychological distress, and there was little evidence of a moderating effect of neighbourhood ethnic density in the hypothesized direction. After controlling for socioeconomic variables, consistently higher indices of distress before and after therapy were evident for patients from White-other, Pakistani, Bangladeshi, and "Other" backgrounds.
Conclusions: Mental health inequalities are evident for people from specific REM groups.

Keywords: Race; ethnicity; depression; anxiety; mental health

Clinical or Methodological Significance of This Article: Consistent with other studies examining electronic mental healthcare records, there is evidence that people from specific racial/ethnic minority groups experience greater psychological distress, and this is not entirely explained by socioeconomic variables nor simply being from a minority group. Furthermore, this mental health inequality persists after accessing psychological therapy, which indicates that this may be related to wider cultural and societal factors rather than treatable psychological problems.

Historically, mental health research has tended to neglect the collection and analysis of data on racial/ethnic diversity, which has limited the field's progress in understanding its relevance for clinical practice (Møllersen & Holte, 2008). In the specific domain of psychotherapy, the relatively small number of clinical trial participants from racial/ethnic minority (REM) backgrounds and lack of granular data on ethnicity have raised questions about the effectiveness of empirically supported treatments for people from REM backgrounds (Hall, 2001). This topic has garnered increasing attention in recent decades. For example, contemporary guidelines for psychologists and psychotherapists emphasize the importance

*Correspondence concerning this article should be addressed to Saiqa Naz The Oxford Institute of Clinical Psychology and Research, Isis Education Centre, Warneford Hospital, Headington, Oxford OX3 7JX, United Kingdom. Email: dr.saiqa.naz@gmail.com

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of multicultural awareness and culturally sensitive practice (e.g., American Psychological Association, 2019; Beck et al., 2019; Substance Abuse and Mental Health Services Administration, 2014). Central to this proposal for culturally sensitive practice is an assumption that people from REM backgrounds may benefit less from therapy if their cultural minority status is not acknowledged, understood, respected, and considered as part of the therapeutic process.

These assumptions about mental health inequalities related to REM status are partially supported by epidemiological and clinical studies. For example, a narrative systematic review suggested that young people from REM backgrounds tend to have higher prevalence and more severe indices of mood and anxiety disorders (Anderson & Mayes, 2010). However, contradictory findings from several studies, heterogeneous results in different ethnic groups, and a lack of meta-analytic synthesis make it difficult to draw firm conclusions from this review. In another systematic review and meta-analysis examining studies of mental healthcare utilization, the odds of having a compulsory inpatient care hospitalization were four times higher (pooled odds ratio = 4.31, 95% CI 3.33–5.58) for Black people compared to White people (Bhui et al., 2003). However, it is unclear if this trend is explained by a higher prevalence of mental health problems in REM groups, a disproportionate use of compulsory hospitalizations for Black people, a higher rate of voluntary admissions by White people, or a combination of these factors. The picture is still less clear when focusing on specific forms of psychological distress. For example, epidemiological surveys indicate that depression prevalence rates vary in different ethnic groups (Alegría et al., 2008; González et al., 2010; Williams et al., 2007), a finding that challenges the notion that poorer mental health is universally attributable to "minoritized" groups (Wingrove-Haugland & McLeod, 2021). Furthermore, some studies suggest that the prevalence of depression is higher in REM groups, but particularly in USA-born respondents rather than foreign-born respondents (González et al., 2010). Such findings plausibly indicate that additional variables may potentially explain (e.g., confounders, mediators) or modify (e.g., moderators) the apparent relationship between REM-status and psychological distress.

The evidence for race/ethnicity-related inequalities in psychological treatment outcomes is also mixed and inconclusive. Numerous meta-analyses have examined the racial/ethnic composition of clinical trial samples as a potential moderator of psychotherapy outcomes. According to a systematic review of 23 meta-analyses with a wide coverage of various forms of therapy and mental disorders, the majority of meta-analyses (n = 20) found that ethnic composition was not a statistically significant effect size moderator (Cougle & Grubaugh, 2022). However, a major limitation of the meta-analytic approach is that aggregated indices of ethnic composition (e.g., % of REM participants) almost certainly mask differences in treatment response for specific REM groups. More recently, studies using large datasets from electronic health records have reported psychological treatment outcome inequalities in specific REM groups. For example, studies in primary care indicate that patients from South Asian, mixed heritage and "other" REM groups have poorer treatment outcomes compared to white British patients (Amati et al., 2023; Arundell et al., 2024; Delgadillo et al., 2017). Another study in secondary care services reported that Black/Black British patients treated for depression and neurotic (non-psychotic) disorders experienced significantly higher distress scores before and after therapy, compared to white British patients (Mercer et al., 2019).

A major challenge in this area is that many studies are underpowered to examine mental health inequalities, given that the base rate of REM study participants is usually low. Furthermore, relatively few studies control for socioeconomic status, which is an important confounder, given the well-established associations between socioeconomic deprivation and the prevalence and severity of common mental disorders (Fryers et al., 2003; Silva et al., 2016; Wilkinson & Pickett, 2007).

Another limitation is that the potential relevance of REM community density is rarely taken into consideration. According to the minority stress hypothesis, being from a minority is associated with unique stressors and disadvantages that are relevant to emotional well-being (Meyer, 1995). Such stressors include exposure to incidents of rejection and discrimination, internalized stigma through the assimilation of negative societal attitudes, and expectations of discrimination, rejection or aggression (Meyer, 2003). According to this literature, social connection and support from an *ingroup* (i.e., similar) community mitigates the minority stress effect, such that persons who live in environments where they are more isolated from their ingroup experience higher levels of distress. This hypothesis has mostly been studied in relation to sexual/gender minority stress, with mixed results (e.g., Helsen et al., 2022; Morandini et al., 2015). Regarding race/ethnicity, it is unclear if ingroup community connectedness may be a moderator of mental health in all or specific REM groups, although some studies suggest that people living in ingroup-dense neighbourhoods have better mental health compared to those living in outgroup-dense neighbourhoods (see review by Shaw et al., 2012).

Overall, it is unclear if people from REM backgrounds systematically experience mental health inequalities and if this warrants special consideration in psychological therapy services. The present study was developed to examine possible mental health inequalities in a large sample of patients accessing psychological treatments in the United Kingdom, controlling for key confounders (e.g., individual and neighbourhood socioeconomic indicators) and examining the moderating effect of neighbourhood ethnic density. Accordingly, we tested three hypotheses: [1] Patients from REM backgrounds will have higher levels of distress compared to white British patients, after controlling for socioeconomic variables. [2] Neighbourhood ethnic density will be a moderator of psychological distress, such that REM patients living in outgroup-dense neighbourhoods (majority white British residents) will be more distressed than those living in more ethnically diverse (ingroup dense) neighbourhoods. [3] The moderator variable described in the prior point will be statistically significant before and after exposure to therapy.

Method

Design, Setting and Interventions

This observational and retrospective cohort study was conducted using electronic health records for a large clinical population that accessed psychological assessments and therapy in the National Health Service (NHS) in England. Archival data from sixteen NHS Talking Therapies (NHS-TT) services collected between January 2014 and 2017 were included in this study. These services covered socioeconomically diverse areas including London, Yorkshire & Humber, Cambridgeshire, Cheshire and Lancashire. Ethical approval to assemble and to analyse this multi-service dataset was obtained from the London City & East NHS Research Ethics Committee (Ref: 15/LO/2200).

NHS-TT services provide evidence-based psychological interventions recommended by clinical guidelines for common mental disorders (National Institute for Health and Care Excellence, 2011). These interventions are offered following a stepped care model, where the initial step involves accessing a low intensity intervention and the next step involves accessing more intensive psychotherapy. Low-intensity interventions are offered to patients with mild-to-moderate depression and anxiety symptoms and involve up to 8 sessions of guided self-help following principles of cognitive behaviour therapy (CBT). These interventions are delivered by qualified psychological wellbeing practitioners, following a structured guided self-help process and didactic materials (Richards & Whyte, 2011). High-intensity interventions include formal psychological therapy delivered by qualified psychotherapists and counsellors, including CBT, person-centred counselling, eye movement desensitization and reprocessing (EMDR), psychodynamic therapy, and interpersonal psychotherapy. Following national guidelines (National Collaborating Centre for Mental Health, 2021), most patients initially accessed low-intensity interventions and high-intensity interventions were offered to those who remained symptomatic after the initial step and to those for whom only high-intensity psychotherapies are indicated (e.g., post-traumatic stress disorder, social anxiety disorder).

Measures

NHS-TT services use a routine outcome monitoring system that requires patients to complete a battery of psychometric measures prior to the start of each treatment session, which enables therapists to monitor treatment response and supports service evaluation. All patients completed three measures that are described below.

Measures of psychological distress. The GAD-7 is a 7-item questionnaire used to identify anxiety disorders; each item is also rated between 0 and 3, with a total severity score between 0 and 21 (Spitzer et al., 2006). A cut-off score $\geq$8 is recommended to identify clinically important anxiety symptoms, with adequate sensitivity (77%) and specificity (82%) (Kroenke et al., 2007). The PHQ-9 is a measure of depression symptoms, where each of 9 questions is rated using a Likert scale from 0 to 3, yielding an overall severity score between 0 and 27 (Kroenke et al., 2001). A cut-off of $\geq$10 has been recommended as providing the best trade-off between sensitivity (88%) and specificity (88%) for a diagnosis of major depressive disorder (Kroenke et al., 2001). The Work and Social Adjustment Scale (WSAS) is a measure of functional impairment due to poor mental health, which rates overall functioning across 5 domains including: work, home management, social life, private leisure activities, and family relationships (Mundt et al., 2002). Responses are provided on a nine-point scale ranging from "not at all" (0) to "very severely impaired" (8), yielding a total severity score between 0 and 40. In the present study sample, only pre-treatment (initial assessment) and post-treatment (measurement at the last attended therapy session) outcome measures were available for analysis.

Demographic and socioeconomic measures. Information about patients' race/ethnicity, gender,

Table 1. Sample characteristics.

Sample $N = 130,857$	
Demographics	
Male	44,099/130,700 (33.7%)
Female	86,601/130,700 (6.3%)
Age (SD)	39.89 (14.66)
Unemployed	33,786/120,270 (28.1%)
Medication (prescribed and taking)	53,493/110,060 (48.6%)
Medication (prescribed and not taking)	9679/110060 (8.8%)
IMD 1 (most deprived)	583/2913 (20.0%)
IMD 10 (least deprived)	36/2913 (1.2%)
Ethnicity	
White British	102,012/130,857 (78%)
White Irish	1434/ 130,857 (1.1%)
White (other)*	8719/130,857 (6.7%)
White and Black Caribbean	1118/130,857 (0.9%)
White and Black African	491/130,857 (0.4%)
White and Asian	608/130,857 (0.5%)
Mixed (other)	1265/130,857 (1.0%)
Indian	2070/130,857 (1.6%)
Pakistani	2913/130,857 (2.2%)
Bangladeshi	1038/130,857 (0.8%)
Asian (other)	1664/130,857 (1.3%)
Black Caribbean	2604/130,857 (2.0%)
Black African	2099/130,857 (1.6%)
Black (other)	783/130,857 (0.6%)
Chinese	323/130,857 (0.2%)
Other*	1716/130,857 (1.3%)
Diagnosis	
Affective disorder	446,13/117,368 (38%)
GAD	16161/117,368 (13.8%)
Mixed	34722/117,368 (29.6%)
Panic/ agoraphobia	3662/117,368 (3.1%)
Social phobia	2164/117,368 (1.8%)
Specific phobia	822/117,368 (0.7%)
OCD	2597/117,368 (2.2%)
PTSD	4168/117,368 (3.6%)
Other	8459/117,368 (7.2%)
Baseline PHQ-9 score: mean (SD)	16.35 (5.63)
Baseline GAD-7 score: mean (SD)	14.65 (4.39)
Baseline WSAS score: mean (SD)	21.0 4 (9.54)
Total mean number of sessions: mean (SD, IQR)	7.25 (5.41, 3-9)
LIT mean number of sessions: mean (SD, IQR)	3.74 (2.9, 1-6)
HIT mean number of sessions: mean (SD, IQR)	7.33 (5.41, 3-10)

Notes: Percentages exclude cases with missing data; LIT = low intensity treatment; HIT = high intensity treatment; IMD = index of multiple deprivation; GAD = generalized anxiety disorder; OCD = obsessive compulsive disorder; PTSD = post-traumatic stress disorder; PHQ-9 = measure of depression severity; GAD-7 = measure of anxiety severity; WSAS = work and social adjustment scale; SD = standard deviation; IQR = interquartile range; "White other" includes eastern European communities; "Other" includes Gypsy, Roma and Traveller communities among other smaller minorities.

age and employment status was available. Patients self-reported their racial/ethnic identity using a structured multiple-choice questionnaire provided by the service at the time of referral, listing all the categories shown in Table 1. Patients' home post-codes were linked to their corresponding Lower Super Output Area (LSOA), a small geography for which demographic and socioeconomic data are publicly available through the Office of National Statistics. LSOA codes were linked to local indices of ethnic density (% of white British residents) and the Index of Multiple Deprivation (IMD; Department for Communities and Local Government, 2015). The IMD ranks neighbourhoods in England using a composite index of socioeconomic deprivation. The IMD is derived from seven domains: average income, unemployment, education level, poor health and disability, crime, barriers to housing and services, and quality of the local environment. IMD scores can be expressed as deciles, where 1 = most deprived areas and 10 = least deprived areas.

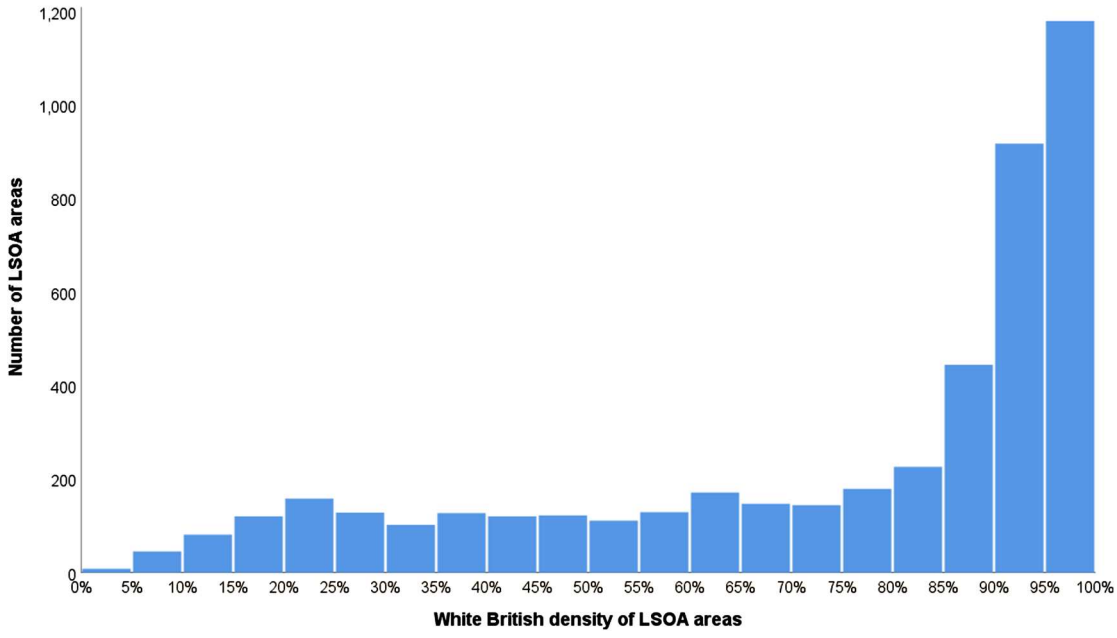


Figure 1. Distribution of lower superoutput areas (LSOA = neighbourhoods) with different densities of white British residents.

Sample Characteristics

The sample selection criteria for this study were defined a-priori, and involved obtaining health care records for patients who: [a] were assessed by a psychological professional and deemed eligible for therapy in primary care services following national guidelines (National Collaborating Centre for Mental Health, 2021); [b] had clinically significant symptoms of depression (PHQ-9 $\geq$ 10) and/or anxiety (GAD-7 $\geq$ 8) at initial assessment; [c] attended at least 1 treatment session after their initial assessment appointment. Using these criteria, records for a total of N = 130,857 patients were included in this study. From this sample, 48.3% (n = 61,451) of patients only accessed low-intensity interventions and 37.7% (n = 48,003) accessed high-intensity interventions. Approximately 14% (n = 17882) were stepped up to a high-intensity treatment after completing a low-intensity intervention. The characteristics of the selected sample are summarized in Table 1. These patients lived across 1,291 neighbourhoods (based on postcode area), most of which were in majority-dense neighbourhoods with a white British population density above 90% (Figure 1).

Statistical Analysis

Case-mix adjusted, mixed effects, multilevel models were developed to test the hypotheses outlined above across all available measures of psychological distress. In each model, the dependent variable was the target measure (GAD-7, PHQ-9 or WSAS) entered as a continuous severity score. The GAD-7 was taken as the primary outcome measure of interest (as a general index of anxiety), and other measures were taken as secondary outcomes.

Two types of models were developed: models predicting pre-treatment scores and models predicting post-treatment scores, resulting in a total of six models. The independent variables in these models included patient-level variables (ethnicity, employment status) and neighbourhood-level variables (index of multiple deprivation [IMD], majority ethnic density [MED] expressed as % of white British residents). The hypothesis-testing variable of interest was the cross-level interaction between the patient's ethnicity and their neighbourhood MED. Ethnicity was a categorical variable with multiple groups and white British as the reference (majority) group, so this cross-level interaction enabled us to test the potential relevance of neighbourhood ethnic density across each of the included REM groups. In the models where the dependent variable was a measure of post-treatment severity, the model additionally controlled for patient-level baseline severity in the pre-treatment score of this measure.

Consistent with conventional guidelines for multilevel modeling (Raudenbush & Bryk, 2002; Snijders & Bosker, 2011), continuous predictors were grand mean-centred and models were developed in sequential steps, starting with single-level models and eventually developing multi-level and

Table 2. Case-mix adjusted multilevel model examining predictors of pre-treatment anxiety (GAD-7) severity.

Fixed effects

Patient-level variables	**B**	**SE**	**Ci-Low**	**Ci-high**	**p**
constant	14.168	0.018	14.132	14.205	< .001*
White Irish	0.139	0.134	−0.125	0.402	0.302
White-other	0.22	0.071	0.081	0.359	0.002*
White and Black Caribbean	0.088	0.178	−0.262	0.437	0.623
White and Black African	0.259	0.275	−0.279	0.798	0.346
White and Asian	−0.157	0.216	−0.581	0.267	0.468
Mixed-other	0.086	0.163	−0.233	0.405	0.596
Indian	0.396	0.164	0.075	0.717	0.016*
Pakistani	0.62	0.153	0.32	0.92	< .001*
Bangladeshi	0.685	0.295	0.107	1.262	0.020*
Asian-other	0.387	0.178	0.037	0.736	0.030*
Black Caribbean	−0.256	0.18	−0.608	0.097	0.155
Black African	−0.21	0.173	−0.55	0.13	0.227
Black-other	0.046	0.273	−0.49	0.581	0.867
Chinese	−0.468	0.285	−1.026	0.09	0.100
Other	0.544	0.15	0.25	0.838	< .001*
Unemployed	1.329	0.029	1.273	1.385	< .001*
Neighbourhood-level variables					
IMD decile (mc)	−0.136	0.006	−0.147	−0.125	< .001*
MED	0.01	0.001	0.008	0.011	< .001*
White Irish x MED	0.003	0.004	−0.006	0.011	0.564
White-other x MED	−0.009	0.002	−0.013	−0.005	< .001*
White and Black Caribbean x MED	−0.015	0.005	−0.025	−0.005	0.003*
White and Black African x MED	0.002	0.008	−0.014	0.018	0.828
White and Asian x MED	−0.015	0.007	−0.028	−0.002	0.020*
Mixed-other x MED	−0.012	0.005	−0.021	−0.003	0.009*
Indian x MED	−0.007	0.004	−0.015	0.001	0.068
Pakistani x MED	−0.012	0.003	−0.019	−0.005	0.001*
Bangladeshi x MED	−0.004	0.007	−0.017	0.009	0.541
Asian-other x MED	−0.015	0.004	−0.024	−0.006	0.001*
Black Caribbean x MED	0	0.004	−0.008	0.008	0.985
Black African x MED	−0.01	0.004	−0.019	−0.002	0.020*
Black-other x MED	0.003	0.007	−0.01	0.017	0.603
Chinese x MED	−0.012	0.009	−0.031	0.007	0.203
Other x MED	−0.007	0.004	−0.016	0.001	0.074
Covariance parameters					
Effects	**Variance**	**SE**	***p***	**ICC**	
Residual effect (patient)	18.533	0.076	<0.001*		
Random effect (neighbourhood)	0.136	0.016	<0.001*	0.007	

*Denotes a statistically significant coefficient; B = regression coefficient; SE = standard error; CI = 95% confidence intervals; ICC = intraclass correlation coefficient; mc = mean centred; MED = majority ethnic density; PHQ-9 = patient health questionnaire (depression); GAD-7 = generalized anxiety disorder (anxiety); WSAS = work and social adjustment scale; −2 log likelihood = 693088.008.

covariate-adjusted models that optimize goodness-of-fit. Model fit was examined after each modelling step by inspecting the −2 log-likelihood statistic and the likelihood ratio test. Fully adjusted multilevel models included random intercepts for the neighbourhood (clustering) level and the intra-cluster correlation coefficient (ICC) was calculated as a measure of variance explained by neighbourhood clustering. Analyses were conducted using MLwiN v3.05 software for multilevel modeling. Descriptive statistics were summarized using SPSS v31.0. The statistical analysis plan was independently peer reviewed and pre-registered with the Clinical and Applied Psychology Unit at the University of Sheffield, which was a pre-requisite to obtain ethical approval by this institution for secondary analysis of the dataset.

Results

The fully adjusted fixed effect coefficients for multilevel models predicting pre-treatment and post-treatment anxiety are presented in Tables 2 and 3. Due to space limitations, the corresponding models for other measures are presented in supplemental materials, although the results of all models are summarized and interpreted below.

Table 3. Case-mix adjusted multilevel model examining predictors of post-treatment anxiety (GAD-7) severity.

Fixed effects

Patient-level variable	**B**	**SE**	**Ci-Low**	**Ci-high**	**p**
constant	8.28	0.024	8.232	8.327	< .001*
Pre-treatment GAD-7 (mc)	0.494	0.004	0.486	0.502	< .001*
White Irish	−0.01	0.179	−0.361	0.342	0.958
White-other	0.328	0.099	0.133	0.523	0.001*
White and Black Caribbean	0.383	0.24	−0.087	0.853	0.110
White and Black African	−0.397	0.381	−1.145	0.35	0.297
White and Asian	0.457	0.292	−0.115	1.03	0.117
Mixed-other	0.513	0.219	0.083	0.943	0.019*
Indian	0.431	0.219	0.003	0.86	0.049*
Pakistani	1.071	0.203	0.673	1.469	< .001*
Bangladeshi	1.046	0.386	0.289	1.803	0.007*
Asian-other	0.586	0.24	0.116	1.056	0.014*
Black Caribbean	0.285	0.236	−0.177	0.746	0.226
Black African	−0.072	0.227	−0.517	0.373	0.751
Black-other	0.883	0.361	0.176	1.59	0.014*
Chinese	0.096	0.399	−0.685	0.878	0.809
Other	0.581	0.206	0.177	0.985	0.005*
Unemployed	3.001	0.038	2.926	3.076	< .001*
Neighbourhood-level variables					
IMD decile (mc)	−0.134	0.007	−0.149	−0.12	< .001*
MED	0.002	0.001	0	0.004	0.019*
White Irish x MED	−0.006	0.006	−0.018	0.005	0.263
White-other x MED	−0.006	0.003	−0.011	0	0.035*
White and Black Caribbean x MED	0.006	0.007	−0.007	0.02	0.336
White and Black African x MED	−0.018	0.011	−0.04	0.004	0.113
White and Asian x MED	0.005	0.009	−0.012	0.023	0.543
Mixed-other x MED	0.004	0.006	−0.009	0.016	0.567
Indian x MED	0.001	0.005	−0.009	0.012	0.781
Pakistani x MED	0.004	0.005	−0.005	0.013	0.378
Bangladeshi x MED	0.003	0.009	−0.014	0.019	0.767
Asian-other x MED	−0.01	0.006	−0.021	0.002	0.100
Black Caribbean x MED	0.009	0.006	−0.002	0.02	0.104
Black African x MED	−0.004	0.006	−0.015	0.007	0.510
Black-other x MED	0.018	0.009	0.001	0.035	0.036*
Chinese x MED	−0.006	0.013	−0.031	0.018	0.625
Other x MED	−0.018	0.006	−0.029	−0.007	0.002*
Covariance parameters					
Effects	**Variance**	**SE**	**p**	**ICC**	
Residual effect (patient)	30.351	0.131	<0.001*		
Random effect (neighbourhood)	0.180	0.026	<0.001*	0.006	

*Denotes a statistically significant coefficient; B = regression coefficient; SE = standard error; CI = 95% confidence intervals; ICC = intraclass correlation coefficient; mc = mean centred; MED = majority ethnic density; PHQ-9 = patient health questionnaire (depression); GAD-7 = generalized anxiety disorder (anxiety); WSAS = work and social adjustment scale; −2 log likelihood = 685910.478.

Anxiety (GAD-7) Models

According to the pre-treatment anxiety model (Table 2), patients from specific REM groups were more severely anxious than those from a white British background: *White-other, Indian, Pakistani, Bangladeshi, Asian-other* and *Other*. These associations were statistically significant after controlling for individual-level employment status and neighbourhood-level IMD, both of which were significantly associated with anxiety severity in the expected direction (unemployed patients and those living in more deprived neighbourhoods were more anxious). Statistically significant cross-level interactions between ethnicity and neighbourhood MED were found for six specific ethnic groups: *White-other, White and Black Caribbean, White and Asian, Mixed-other, Pakistani, Asian-other,* and *Black African*. Contrary to the minority stress hypothesis, the direction of this association indicates that patients from these REM groups tended to have *lower (rather than higher) anxiety scores* if they were living in outgroup-dense neighbourhoods with a greater proportion of white British residents.

According to the post-treatment anxiety model (Table 3), patients from eight specific REM groups had poorer treatment outcomes (higher mean-level

of anxiety severity) relative to white British patients: *White-other, Mixed-other, Indian, Pakistani, Bangladeshi, Asian-other, Black-other* and *Other*. These findings were statistically significant after controlling for confounders described above (pre-treatment anxiety severity, employment status, neighbourhood IMD). Statistically significant cross-level interactions were found for three specific ethnic groups: *White-other*, *Black-other, Other*. The coefficient of this association was in the hypothesized direction for the *Black-other* group (patients living in outgroup-dense neighbourhoods were more anxious), but in the opposite direction for the other two groups.

Overall, comparing the results for pre- and post-treatment models, the most consistent pattern of findings indicates that people from the following REM groups had more severe anxiety before and after treatment: *White-other, Indian, Pakistani, Bangladeshi, Asian-other* and *Other*. The only cross-level interactions that were consistent across both models were for the *White-other* group, indicating that patients from this REM background were less anxious if they lived in outgroup-dense neighbourhoods.

Depression (PHQ-9) Models

Fully-adjusted results for the depression models are presented in supplemental materials (tables S1-2). After controlling for confounders (employment, IMD), the pre-treatment depression model indicates that patients from specific REM groups were more severely depressed than those from a white British background: *White-other, White and Asian, Indian, Pakistani, Bangladeshi, Asian-other, Black-other* and *Other*. Significant cross-level interactions between ethnicity and neighbourhood MED were found for six specific ethnic groups: *White-other, Mixed-other, Indian, Pakistani, Bangladeshi,* and *Asian-other*. The coefficients for these interactions were in the opposite direction to that predicted by the minority stress hypothesis.

After controlling for confounders (pre-treatment PHQ-9, employment, IMD), the post-treatment depression model indicates that patients from specific REM groups had poorer treatment outcomes (higher mean-level of depression severity) relative to white British patients: *White-other, Mixed-other, Pakistani, Bangladeshi* and *Other*. Significant cross-level interactions between ethnicity and neighbourhood MED were found for four specific ethnic groups: *White-other, Asian-other, Black Caribbean* and *Other*. The coefficient of this association was in the hypothesized direction for the *Black Caribbean* group (patients living in outgroup-dense neighbourhoods were more depressed), but in the opposite direction for the other groups.

Overall, the most consistent pattern of findings indicates that people from the following REM groups had more severe depression before and after treatment: *White-other, Pakistani, Bangladeshi,* and *Other*. The only consistent statistically significant cross-level interactions were for the *White-other* and *Asian-other* ethnic groups, with coefficients in the opposite direction to that predicted by the minority stress hypothesis.

Functional Impairment (Wsas) Models

Fully-adjusted results for the functional impairment models are presented in supplemental materials (tables S3-4). After controlling for confounders (employment, IMD), the pre-treatment model indicates that patients from specific REM groups were more severely impaired than those from a white British background: *White Irish, White-other, White and Black Caribbean (mixed), White and Black African (mixed), Mixed-other, Indian, Pakistani, Bangladeshi, Asian-other, Black Caribbean, Black African, Black-other* and *Other*. Significant cross-level interactions between ethnicity and neighbourhood MED were found for only one ethnic group: *Indian*. The interaction coefficient was in the hypothesized direction, suggesting that Indian patients living in outgroup-dense neighbourhoods tended to be more functionally impaired.

After controlling for confounders (pre-treatment WSAS, employment, IMD), the post-treatment model indicates that patients from specific REM groups had poorer treatment outcomes (higher mean-level of functional impairment) relative to white British patients: *White-other, White and Asian (mixed), Mixed-other, Pakistani, Bangladeshi, Asian-other, Black-other* and *Other*. However, the coefficient for the *White and Black African (mixed)* group suggests that patients from this background tended to have better treatment outcomes relative to white British patients. Significant cross-level interactions between ethnicity and neighbourhood MED were found for two specific groups: *Black Caribbean,* with a coefficient in the hypothesized direction, and *White and Black African (mixed)*, with a coefficient in the opposite direction.

Overall, the most consistent pattern of findings indicates that people from the following REM groups had more severe functional impairment before and after treatment: *White-other, White and Black African (mixed), Mixed (other), Pakistani, Bangladeshi, Asian-other, Black-other* and *Other*. There

were no consistently significant cross-level interactions that replicated in both models.

Discussion

This study adds to a growing body of evidence regarding socioeconomic inequalities in mental health. Consistent with prior evidence (e.g., see review by Finegan et al., 2018), patients who were unemployed and/or living in deprived neighbourhoods had poorer mental health indicators across all measures used in this study, which persisted after completing an episode of psychological therapy. After controlling for these socioeconomic confounders, patients from specific REM groups were more psychologically distressed before and after therapy by comparison to white British patients. The most robust evidence, which replicated across all three measures of distress, concerns four groups: *White-other (e.g., eastern European communities)*, *Pakistani*, *Bangladeshi*, and *Other* (minorities such as Gypsy, Roma and Traveller communities). This is also consistent with evidence from other studies conducted in NHS-TT services in England that controlled for clinical and socioeconomic confounders. For example, Delgadillo et al. (2017) found that patients from the following REM groups had more severe post-treatment depression/anxiety scores compared to white British patients: *South Asian* (which aggregates groups such as *Indian*, *Pakistani*, *Bangladeshi*), dual heritage (aggregates *mixed* groups), and *Other*. Similarly, Arundell et al. (2024) found that the following groups were less likely to reliably recover from depression/anxiety after treatment: *White-other*, *Asian* (aggregated in the same way as above), and *Other*. In another study, Amati et al. (2023) found that the following REM groups had a significantly ($p < .05$) lower probability of post-treatment reliable improvement in depression and anxiety: *White-other, Indian, Pakistani, Asian-other, Other*. Overall, replicated evidence from different research groups supports the conclusion that these specific REM groups are affected by mental health inequalities.

A potential explanatory framework for such inequalities is proposed by the minority stress model (Frost & Meyer, 2023). According to this perspective, people from REM groups experience unique stressors which would be exacerbated in contexts where the person is outnumbered by outgroup members and/or isolated from ingroup members. The findings from this study do not support this hypothesis. If being minoritized is systematically disadvantageous for psychological well-being, as proposed by this hypothesis, we would expect to see higher levels of distress for *all* REM groups relative to the majority (white British) group. Instead, we observe *specific* (not universal) inequalities described above. Furthermore, the fact that the statistically smallest minorities, such as *Chinese* and *Black-other*, did not have consistently poorer indicators of distress further undermines the credibility of the minority stress model in this clinical context and population. In addition, to support this hypothesis, we would expect to observe heightened levels of distress in contexts where REM persons are vastly outnumbered, such as in outgroup-dense neighbourhoods. Instead, we found that the regression coefficients (interaction terms) that tested this moderator hypothesis were mostly not statistically significant, and those that were significant did not fit with the assumptions of the minority stress model. Moreover, we are cautious to interpret these interaction terms, since the pattern of findings did not consistently replicate in the models testing pre-treatment and post-treatment distress, nor across measures of distress.

Simply being part of a minority does not explain why some specific REM groups experience mental health inequalities, and hence, it may be that culture-specific factors may be implicated in the pattern of associations described above. It is difficult to draw firm conclusions regarding the "o*ther*" categories (e.g., *White-other*, *Asian-other*, etc.), as it is unclear what specific racial/ethnic or cultural heritages may be contained within these aggregated categories. However, one of the commonalities between the *Pakistani* and *Bangladeshi* groups is the predominance of Muslim faith and cultural norms. This interpretation is supported by a recent study reporting that, after controlling for ethnicity and socioeconomic status, patients of Muslim faith were less likely to recover from mental health problems after psychological therapy by comparison to patients of other faiths and those without religious beliefs (Shafan-Azhar et al., 2025). It is possible that people of a Muslim faith may perceive and/or experience prejudice and discrimination in a way that does not affect other minorities living in the UK (Field, 2007; Samari et al., 2018). An alternative although related explanation is that people from South Asian backgrounds may not feel that health services or therapists fully understand or respect their cultural world view and values. For example, Mir et al. (2015) found that depressed Muslim patients were sometimes concerned that discussing their concerns might reinforce negative stereotypes of Muslim communities, and therefore they expected therapists to genuinely respect and accept that Islamic teachings could be helpful to them. Hence, adapting the delivery of therapy in a way that openly acknowledges and

incorporates aspects of the patient's cultural worldview could make it more acceptable and effective. To this end, Naeem et al. (2019) recommend that initial psychological assessments should explore the patient's religious orientation as well as issues related to stigma and racism. In a meta-analysis on this topic, Benish et al. (2011) found that culturally adapted therapy is more effective than conventional therapy. According to these authors, cultural adaptation integrates culturally-relevant metaphors, stories and symbols that enable a shared understanding of "the illness" and how to improve it. Similarly, Soto et al. (2018) discuss the need to conduct psychological assessments and treatment in a way that recognizes the cultural values and needs of patients. In a meta-analysis on this topic, they found that patients' perceptions of their therapist's multicultural competence were significantly associated with treatment engagement and outcomes (Soto et al., 2018).

While attention to multicultural competence is both laudable and empirically supported, it is also clear that not all REM groups need culturally adapted treatments. In fact, only specific REM and religious faith groups are evidently affected by mental health inequalities, and this is likely to be related to cultural factors rather than their minority status per se.

Limitations and Future Directions for Research

The present results should be considered in light of a number of limitations. Despite the large sample size achieved through the aggregation of a multi-service dataset, some REM groups nevertheless were relatively small. For example, the *Chinese* and *Black-other* groups had base rates smaller than 1% of the total sample. An important limitation is the lack of granularity of some categories such as those labelled with the qualifier "other", which is how the source data were coded in the electronic health records. Given these limitations, separate analyses for low intensity and high intensity interventions would significantly reduce the sample size for some of the less prevalent REM groups, making such analyses unreliable. Other limitations are the lack of data on the primary spoken language and the residency status for patients in this sample. Therefore, it is unclear if language barriers or the asylum/refugee seeking status of some patients could be relevant confounders. Future studies could collect data on current immigration status (e.g., citizen/resident, asylum seeker or refugee status), family immigration history (e.g., first, second, third generation of immigrants), primary language (including use of interpreters) to gain a greater understanding of whether such variables could be associated with treatment outcomes after controlling for other socioeconomic confounders. Moreover, no information was available regarding therapist characteristics, so it was not possible to investigate interactions between patient and therapist characteristics. While there is mixed and inconclusive evidence on the effectiveness of ethnicity-matching (Cabral & Smith, 2011; Maramba & Nagayama Hall, 2002; Shin et al., 2005), future research could collect more detailed therapist variables to investigate which factors might interact with the patient's ethnicity (e.g., cultural competence, facilitative interpersonal skills, individualistic versus collectivistic values).

Conclusions

Treatment-seeking patients from specific REM groups are affected by mental health inequalities. Such inequalities are likely to be related to cultural factors, since they persist after accounting for the influence of socioeconomic variables and after accessing psychological care.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Data Availability Statement

In line with the requirements of the ethics review board for this dataset, requests for access to data are to be made in writing to the data controller (*masked*).

ORCID

Saiqa Naz http://orcid.org/0000-0002-1185-8411
Jaime Delgadillo http://orcid.org/0000-0001-5349-230X

References

Alegría, M., Chatterji, P., Wells, K., Cao, Z., Chen, C. N., Takeuchi, D., … Meng, X. L. (2008). Disparity in depression treatment among racial and ethnic minority populations in the United States. *Psychiatric Services*, *59*(11), 1264–1272. https://doi.org/10.1176/ps.2008.59.11.1264

Amati, F., Green, J., Kitchin, L., Watt, H., Jones, S., AlRubaye, N., … Greenfield, G. (2023). Ethnicity as a predictor of

outcomes of psychological therapies for anxiety and depression: A retrospective cohort analysis. *Behavioural and Cognitive Psychotherapy*, *51*(2), 164–173. https://doi.org/10.1017/S1352465822000558

American Psychological Association, APA Task Force on Race and Ethnicity Guidelines in Psychology. (2019). *Race and ethnicity guidelines in psychology: Promoting responsiveness and equity*. http://www.apa.org/about/policy/race-and-ethnicity-in-psychology.pdf.

Anderson, E. R., & Mayes, L. C. (2010). Race/ethnicity and internalizing disorders in youth: A review. *Clinical Psychology Review*, *30*(3), 338–348. https://doi.org/10.1016/j.cpr.2009.12.008

Arundell, L. L. C., Saunders, R., Buckman, J. E., Lewis, G., Stott, J., Singh, S., Jena, R., Naqvi, S. A., Leibowitz, J., & Pilling, S. (2024). Differences in psychological treatment outcomes by ethnicity and gender: An analysis of individual patient data. *Social Psychiatry and Psychiatric Epidemiology*, *59*, 1519–1531. https://doi.org/10.1007/s00127-024-02610-8

Beck, A., Naz, S., Brooks, M., & Jankowska, M. (2019). *IAPT Black, Asian and Minority Ethnic service user positive practice guide*. *British Association for Behavioural and Cognitive Psychotherapies*, https://babcp.com/Therapists/BAME-Positive-Practice-Guide.

Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: A direct-comparison meta-analysis. *Journal of Counseling Psychology*, *58*(3), 279–289. https://doi.org/10.1037/a0023626

Bhui, K., Stansfeld, S., Hull, S., Priebe, S., Mole, F., & Feder, G. (2003). Ethnic variations in pathways to and use of specialist mental health services in the UK: Systematic review. *The British Journal of Psychiatry*, *182*(2), 105–116. https://doi.org/10.1192/bjp.182.2.105

Cabral, R. R., & Smith, T. B. (2011). Racial/ethnic matching of clients and therapists in mental health services: A meta-analytic review of preferences, perceptions, and outcomes. *Journal of Counseling Psychology*, *58*(4), 537–554. https://doi.org/10.1037/a0025266

Cougle, J. R., & Grubaugh, A. L. (2022). Do psychosocial treatment outcomes vary by race or ethnicity? A review of meta-analyses. *Clinical Psychology Review*, *96*, 102192. https://doi.org/10.1016/j.cpr.2022.102192

Delgadillo, J., Dawson, A., Gilbody, S., & Böhnke, J. R. (2017). Impact of long-term medical conditions on the outcomes of psychological therapy for depression and anxiety. *British Journal of Psychiatry*, *210*(1), 47–53. https://doi.org/10.1192/bjp.bp.116.189027

Department for Communities and Local Government. (2015, September 30). *English indices of deprivation* 2015. https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015.

Field, C. D. (2007). Islamophobia in contemporary Britain: The evidence of the opinion polls, 1988–2006. *Islam and Christian Muslim Relations*, *18*(4), 447–477. https://doi.org/10.1080/09596410701577282

Finegan, M., Firth, N., Wojnarowski, C., & Delgadillo, J. (2018). Associations between socioeconomic status and psychological therapy outcomes: A systematic review and meta-analysis. *Depression and Anxiety*, *35*(6), 560–573. https://doi.org/10.1002/da.22765

Frost, D. M., & Meyer, I. H. (2023). Minority stress theory: Application, critique, and continued relevance. *Current Opinion in Psychology*, *51*, 101579. https://doi.org/10.1016/j.copsyc.2023.101579

Fryers, T., Melzer, D., & Jenkins, R. (2003). Social inequalities and the common mental disorders. *Social Psychiatry and Psychiatric Epidemiology*, *38*(5), 229–237. https://doi.org/10.1007/s00127-003-0627-2

González, H. M., Tarraf, W., Whitfield, K. E., & Vega, W. A. (2010). The epidemiology of major depression and ethnicity in the United States. *Journal of Psychiatric Research*, *44*(15), 1043–1051. https://doi.org/10.1016/j.jpsychires.2010.03.017

Hall, G. C. N. (2001). Psychotherapy research with ethnic minorities: Empirical, ethical, and conceptual issues. *Journal of Consulting and Clinical Psychology*, *69*(3), 502–510. https://doi.org/10.1037/0022-006X.69.3.502

Helsen, V., Enzlin, P., & Gijs, L. (2022). Mental health in transgender adults: The role of proximal minority stress, community connectedness, and gender nonconformity. *Psychology of Sexual Orientation and Gender Diversity*, *9*(4), 466–477. https://doi.org/10.1037/sgd0000530

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kroenke, K., Spitzer, R. L., Williams, J. B. W., Monahan, P. O., & Löwe, B. (2007). Anxiety disorders in primary care: Prevalence, impairment, comorbidity, and detection. *Annals of Internal Medicine*, *146*(5), 317–325. https://doi.org/10.7326/0003-4819-146-5200703060-00004

Maramba, G. G., & Nagayama Hall, G. C. (2002). Meta-analyses of ethnic match as a predictor of dropout, utilization, and level of functioning. *Cultural Diversity and Ethnic Minority Psychology*, *8*(3), 290–297. https://doi.org/10.1037/1099-9809.8.3.290

Mercer, L., Evans, L. J., Turton, R., & Beck, A. (2019). Psychological therapy in secondary mental health care: Access and outcomes by ethnic group. *Journal of Racial and Ethnic Health Disparities*, *6*, 419–426. https://doi.org/10.1007/s40615-018-00539-8

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, *36*(1), 38–56. https://doi.org/10.2307/2137286

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychological Bulletin*, *129*(5), 674–697. https://doi.org/10.1037/0033-2909.129.5.674

Mir, G., Meer, S., Cottrell, D., McMillan, D., House, A., & Kanter, J. W. (2015). Adapted behavioural activation for the treatment of depression in Muslims. *Journal of Affective Disorders*, *180*, 190–199. https://doi.org/10.1016/j.jad.2015.03.060

Møllersen, S., & Holte, A. (2008). Ethnicity as a variable in mental health research: A systematic review of articles published 1990–2004. *Nordic Journal of Psychiatry*, *62*(4), 322–328. https://doi.org/10.1080/08039480802044414

Morandini, J. S., Blaszczynski, A., Dar-Nimrod, I., & Ross, M. W. (2015). Minority stress and community connectedness among gay, lesbian and bisexual Australians: A comparison of rural and metropolitan localities. *Australian and New Zealand Journal of Public Health*, *39*(3), 260–266. https://doi.org/10.1111/1753-6405.12364

Mundt, J. C., Marks, I. M., Shear, M. K., & Greist, J. M. (2002). The work and social adjustment scale: A simple measure of impairment in functioning. *British Journal of Psychiatry*, *180*(5), 461–464. https://doi.org/10.1192/bjp.180.5.461

Naeem, F., Phiri, P., Rathod, S., & Ayub, M. (2019). Cultural adaptation of cognitive–behavioural therapy. *BJPsych Advances*, *25*(6), 387–395. https://doi.org/10.1192/bja.2019.15

National Collaborating Centre for Mental Health. (2021). *The Improving Access to Psychological Therapies Manual*, *Version 4*. NHS England.

National Institute for Health and Care Excellence. (2011). *Common mental health disorders: Identification and pathways to care.* https://www.nice.org.uk/guidance/cg123.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). SAGE Publications.

Richards, D. A., & Whyte, M. (2011). *Reach Out: National programme educator materials to support the delivery of training for psychological wellbeing practitioners delivering Low intensity interventions* (3rd ed.). Rethink Mental Illness.

Samari, G., Alcalá, H. E., & Sharif, M. Z. (2018). Islamophobia, health, and public health: A systematic literature review. *American Journal of Public Health*, *108*(6), e1–e9. https://doi.org/10.2105/ajph.2018.304402

Shafan-Azhar, Z., Suh, J. W., Delamain, H., Arundell, L. L., Naqvi, S. A., Knight, T., … Buckman, J. E. (2025). Psychological therapy outcomes and engagement in people of different religions. *JAMA Network Open*, *8*(4), e254026. https://doi.org/10.1001/jamanetworkopen.2025.4026

Shaw, R. J., Atkin, K., Bécares, L., Albor, C. B., Stafford, M., Kiernan, K. E., Nazroo, J. Y., Wilkinson, R. G., & Pickett, K. E. (2012). Impact of ethnic density on adult mental disorders: Narrative review. *British Journal of Psychiatry*, *201*(1), 11–19. https://doi.org/10.1192/bjp.bp.110.083675

Shin, S.-M., Chow, C., Camacho-Gonsalves, T., Levy, R. J., Allen, I. E., & Leff, H. S. (2005). A meta-analytic review of racial-ethnic matching for African American and Caucasian American clients and clinicians. *Journal of Counseling Psychology*, *52*(1), 45–56. https://doi.org/10.1037/0022-0167.52.1.45

Silva, M., Loureiro, A., & Cardoso, G. (2016). Social determinants of mental health: A review of the evidence. *The European Journal of Psychiatry*, *30*(4), 259–292.

Snijders, T., & Bosker, R. (2011). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). SAGE Publications Ltd.

Soto, A., Smith, T. B., Griner, D., Domenech Rodríguez, M., & Bernal, G. (2018). Cultural adaptations and therapist multicultural competence: Two meta-analytic reviews. *Journal of Clinical Psychology*, *74*(11), 1907–1923. https://doi.org/10.1002/jclp.22679

Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder. *Archives of Internal Medicine*, *166*(10), 1092. https://doi.org/10.1001/archinte.166.10.1092

Substance Abuse and Mental Health Services Administration. (2014). *TIP 59: Improving Cultural Competence*, *Quick Guide for Clinicians*. HHS Publication No. (SMA) 16-4931. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

Wilkinson, R. G., & Pickett, K. E. (2007). The problems of relative deprivation: Why some societies do better than others. *Social Science & Medicine*, *65*(9), 1965–1978. https://doi.org/10.1016/j.socscimed.2007.05.041

Williams, D. R., González, H., Neighbors, H., Nesse, R., Abelson, J. M., Sweetman, J., & Jackson, J. S. (2007). Prevalence and distribution of major depressive disorder in African Americans, Caribbean blacks, and non-hispanic whites: Results from the national survey of American life. *Archives of General Psychiatry*, *64*(3), 305–315. https://doi.org/10.1001/archpsyc.64.3.305

Wingrove-Haugland, E., & McLeod, J. (2021). Not "minority" but "minoritized". *Teaching Ethics*, *21*(1), 1–11. https://doi.org/10.5840/tej20221799