Narrative Review Article

What Treatments Are Effective for Generalized Anxiety Disorder in Ethnic Minority Groups?

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ABSTRACT

Generalized anxiety disorder (GAD) is a widespread mental health condition that affects individuals across diverse cultural backgrounds. However, the development of its treatments has primarily focused on Western, Educated, Industrialized, Rich, and Democratic (WEIRD) populations. This overreliance on WEIRD samples disregards genetic, cultural, and socioeconomic factors that influence the effectiveness of GAD interventions among ethnic minority groups. These populations often face distinctive barriers to treatment such as lack of accessibility, cultural stigma, and mistrust in healthcare systems, all of which limit treatment engagement. The objective of this literature review is to examine the effectiveness of existing GAD interventions for ethnic minority populations. This review covers GAD interventions that have shown promising results among minority populations: Emotion Regulation Therapy (ERT), Cognitive Behavioral Therapy (CBT) combined with venlafaxine XR, Motivational Interviewing (MI) as a pretreatment, and culturally adapted CBT. These studies suggest potential directions for the future development of culturally inclusive GAD treatments.

Keywords: generalized anxiety disorder; ethnic minority; psychological treatment; WEIRD, cognitive behavioral therapy

INTRODUCTION

Generalized anxiety disorder (GAD) is a prevalent mental health condition that is characterized by uncontrollable worry and excessive anxiety. GAD symptoms last 6 months or longer and include concern, restlessness, difficulty sleeping, tiredness, irritability, sweating, and trembling (1). The condition negatively affects day-to-day life, resulting in decreased productivity and social interactions. In the United States, the lifetime prevalence of GAD is approximately 12% (2). Cognitive Behavioral Therapy (CBT) and pharmacological interventions, such as selective serotonin and selective norepinephrine reuptake inhibitors, have been widely utilized to mitigate GAD symptoms. While these treatments have shown effectiveness in controlled settings, recent samples suggest that their success differs across ethnic groups (3). This limitation is largely due to the reliance on research samples from WEIRD populations.

Human psychology is often based on samples from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies. Due to the overreliance on WEIRD populations, researchers often assume that these individuals are "standard subjects" or that human behavior is identical across populations (4). However,

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Accepted July 23, 2026
https://doi.org/10.70251/HYJR2348.44485490

this conclusion fails to acknowledge the influence of cultural values, socioeconomic status, and healthcare accessibility. Moreover, this assumption disregards how certain populations may express symptoms of mental health disorders. This deviation highlights the need for more inclusive research that covers a variety of ethnic populations to avoid biased results and assumptions.

WEIRD samples influence the creation, usage, and effectiveness of GAD interventions. Fundamental aspects of psychology have often been developed using non-minority samples, creating treatments that are not effective for all populations. Although effective treatments for anxiety disorders are well established, treatment outcome research among ethnic minority populations remains limited (3). This gap in the literature leads to concerns about whether current treatments for GAD are equally effective across multiple populations.

Furthermore, pharmacological treatments have varying efficacy among ethnic groups due to genetic variation. Basing standardized pharmacological doses for GAD medications on WEIRD samples may fail to account for differences among other ethnic groups, potentially reducing treatment effectiveness and increasing the risk of adverse effects (5). This literature review aims to examine the effectiveness of existing GAD interventions among ethnic minority populations and explore potential solutions for improving culturally inclusive treatments.

EXISTING TREATMENTS THAT SHOW PROMISE AMONG MINORITY GROUPS

Study 1: Emotion Regulation Therapy

Emotion Regulation Therapy (ERT) is an intervention that specifically focuses on motivational mechanisms, regulatory mechanisms including self-referential (i.e., self-criticism, rumination, excessive worry) and behavioral responses. ERT is divided into two phases, with the first focusing on building emotional awareness and emotion regulation skills. Patients are taught strategies to help regulate feelings of anxiety, anger, and sadness. These skills are aimed at helping individuals develop alternative reactions to worry, rumination, and self-criticism. Instead of reacting instinctively to difficult emotional situations, patients are instructed to approach them methodically using these skills when recognizing emotional and motivational triggers.

Renna *et al.* (6) conducted a 16-session version of ERT in a racially diverse sample of young adults. The sample consisted of 45.16% White, 6.45% African American, 19.35% Asian American or Pacific Islander, 9.68% multiracial, 3.23% other, and 16.13% Hispanic participants. In income, 30.43% reported that their household income fell below $25,000 annually, 30.43% stated that their household income fell between $25,000 and $49,999, and 13.04% between $50,000 and $79,999.

Following the 16-session period, participants showed improvements across several outcome measures. Over half of the participants showed a significant decrease in GAD symptoms by the end of the treatment, with consistent improvements at the 3-month and 9-month follow-ups. Additionally, over 80% of participants received CGI-I scores below the clinical threshold at posttreatment. Using a more specific measure, in which participants were required to make a 30% improvement in at least four out of six self-reports, 80% of participants achieved this goal.

Furthermore, the efficacy of ERT was consistent across ethnic groups, with no significant differences in GAD treatment outcomes based on race. These findings suggest that ERT may be an effective intervention for ethnic minority populations.

Study 2: CBT combined with venlafaxine XR

Venlafaxine XR is a pharmacological medication that alters brain chemicals to help regulate emotions. It stops the brain from reabsorbing serotonin, noradrenaline, and to a smaller extent, dopamine. This allows it to improve symptoms commonly associated with GAD (7).

In this study, Markell *et al*. (8) offered a randomly selected group (24 African Americans, 52 European Americans) the option to add 12 sessions of CBT to venlafaxine XR treatment. Of those offered CBT, 33.3% of African Americans and 32.6% of European Americans accepted and attended at least one CBT treatment session.

Across all primary and secondary efficacy measures (e.g., Hamilton Anxiety Scale [HAM-A], Hamilton Depression Scale [HAM-D], Hospital Anxiety and Depression Scale [HAD], General Health Questionnaire [GHQ-12], and Penn State Worry Questionnaire [PSWQ]), there were no notable differences in the results between African American and European American participants. Both groups showed considerable improvement over the course of the treatment, with participants experiencing significant symptom reduction over time measured by HAM-A. African American participants showed relatively faster improvements than European Americans, but the difference was too small to draw definitive conclusions.

CBT, a commonly used intervention method, was associated with improvements in an African American sample with GAD. However, CBT was implemented with concurrent treatments of venlafaxine XR, so the effectiveness of CBT alone in African American populations remains unclear. Despite this limitation, the study provides preliminary evidence that CBT, when integrated with pharmacological medication, may be effective for African American individuals affected by GAD.

Study 3: Motivational Interviewing Pretreatment to CBT

Motivational Interviewing (MI) is a conversational style that facilitates collaboration between healthcare providers and patients. It aims to address health-related issues through patient introspection and empowerment while emphasizing open-ended questions, empathy, and a patient-centered approach (9).

Westra *et al.* (10) explored the efficacy of CBT following MI pretreatment.. The racial demographics of the sample were not explicitly stated but were instead described as "ethnically diverse." The treatment consisted of training in self-monitoring, applied relaxation, cognitive therapy, behavioral approach tasks, and exposure to worry cues. Patients were given six weekly 2-hour therapy sessions, followed by two 1-hour sessions, amounting to 14 hours of CBT. Therapists were instructed to give each component in the course of treatment, but the timing and duration of each component were left to the judgment of the therapists based on feedback.

Results were measured through The Penn State Worry Questionnaire (PSWQ), a widely utilized 16-item instrument examining trait worry. Scores range from 16-80, with higher scores indicating greater worry. Analysis of mean PSWQ scores over the course of the MI-CBT treatment showed that moderate severity groups displayed improvement and maintained these improvements through the 6-month and 12-month follow-ups. High-severity groups displayed the greatest initial improvement, but symptoms partially reappeared at the 6-month follow-up. However, by the 12-month follow-up, patients in the high-severity group made a partial recovery. Additionally, 81% of high-severity individuals who were treated through MI-CBT no longer met GAD criteria after 12 months. These findings provide preliminary support for MI-CBT as a potentially viable intervention method in a racially diverse environment. Moreover, MI's focus on introspection could be compatible with culturally tailored interventions to enhance efficacy in minority groups.

However, the lack of clarity in the sample may raise concern. It was only described as "ethnically diverse," which may be misleading. Ultimately, while MI-CBT is a promising treatment, its lack of precise data restricts a full understanding of its applicability for minority populations.

Study 4: CBT in an academic setting

Ginsburg and Drake (11) aimed to evaluate the efficacy of CBT among an adolescent African American population in a high school setting. Participants were 12 African Americans (10 females, 2 males) ranging from 14 to 17 years, who attended an urban high school in Baltimore. Approximately 35% of students at this high school were living below the poverty line, while 75% were living in single-parent households. The adolescents chosen for this study met the DSM-IV criteria for a primary anxiety diagnosis and were not currently receiving any treatments aimed at reducing anxiety symptoms.

Participants were divided into two groups: one received CBT while the other received Attention-Support. The CBT group was treated through a modified version of CBT by Silverman *et al.* 1995. The length of the treatment was reduced from 12 to 10 sessions, and examples were adjusted to include experiences that the participants were likely to encounter such as neighborhood violence, parental issues, financial hardship, and drug use. Despite these alterations, key components of CBT such as relaxation exercises, psychoeducation, and cognitive restructuring were preserved.

The Attention-Support group focused on providing adolescents with emotional support without the use of CBT. Sessions centered around discussing experiences related to anxiety, providing peer support, and highlighting similarities and differences among group members. Therapists specifically avoided aspects of CBT such as promoting approach behavior or challenging fear-evoking cognitions.

Pre- and post-primary diagnoses and ADIS-IV-C impairment ratings revealed significant differences between the CBT and Attention-Support groups in terms of treatment efficacy. In the CBT group, all four participants showed significant improvements in their primary diagnoses, with three no longer meeting criteria for their primary diagnosis posttreatment. In the Attention-Support group, improvements were less

substantial. While some participants displayed symptom reduction posttreatment, four out of five continued to meet the criteria for their primary diagnosis.

These results suggest that modified CBT may be a viable intervention for GAD in minority groups. Furthermore, adapting existing treatments for GAD to align with cultural, social, and environmental contexts of ethnic minorities may enhance engagement and efficacy.

Table 1. *Summary of studies evaluating interventions for generalized anxiety disorder (GAD) in ethnically diverse or ethnic minority populations. The table compares each study by population, intervention type, study design, primary outcomes, key findings, and limitations.*

Study	Population	Intervention	Study Design	Primary Outcomes	Key Findings	Limitations
Renna *et al*. (6)	31 ethnically diverse young adults with GAD enrolled at a large urban university	Emotion Regulation Therapy (ERT)	Pilot clinical trial	ERT significantly reduced GAD symptoms, depression, worry, rumination, and disability, with improvements in quality of life and emotion regulation maintained through 9-month follow-up.	ERT was associated with improved outcomes in a racially diverse sample, with treatment outcomes remaining consistent across racial and ethnic groups.	No control group, small sample size, limited subgroup analyses
Markell *et al*. (8)	24 African American and 52 European American adults with GAD	Cognitive Behavioral Therapy (CBT) combined with venlafaxine XR	Randomized clinical trial	Both African American and European American participants experienced significant reductions in anxiety symptoms and improvements across all primary and secondary efficacy measures over 24 weeks.	No significant differences in treatment outcomes were found between African American and European American participants.	Small sample size, CBT was administered concurrently with venlafaxine XR
Westra *et al*. (10)	76 ethnically diverse adults with GAD	Motivational Interviewing (MI) pretreatment followed by Cognitive Behavioral Therapy (CBT)	Preliminary randomized controlled trial	Participants who received MI pretreatment followed by CBT demonstrated significant reductions in worry severity, with improvements maintained at 6- and 12-month follow-up.	Adding MI pretreatment to CBT enhanced worry reduction and treatment engagement, particularly among participants with high baseline worry severity.	Small subgroup sample size, no active pretreatment control group
Ginsburg and Drake (11)	12 low-income African American adolescents with anxiety disorders	School-based group Cognitive Behavioral Therapy (CBT)	Controlled pilot study	Participants showed significant reductions in anxiety symptoms and clinician-rated impairment, with 75% no longer meeting criteria for their primary anxiety disorder at posttreatment.	School-based CBT was associated with improved outcomes for African American adolescents, with treatment response rates comparable to those reported in studies with White youths.	Small sample size, no follow-up assessment

VALUABLE INSIGHTS FOR DEVELOPING INTERVENTIONS FOR MINORITY GROUPS

Minorities, specifically Black, Hispanic, and Asian, are the fastest-growing segment of the United States population (12). Creating generalized anxiety disorder interventions for these various ethnic communities is essential to producing the most effective and beneficial results for all possible consumers (3). As summarized in Table 1, the four included studies highlight multiple overlapping elements that enhance the efficacy of GAD treatments across ethnically diverse populations. A key component across all intervention methods was cultural adaptation. Treatments incorporating the values and experiences of patients were associated with improved engagement while also cultivating a deeper sense of trust with the therapist. Additionally, emotion regulation was emphasized throughout all four studies. Educating patients on how to identify and respond to distressing emotions appeared to be beneficial across ethnic groups. Furthermore, multi-faceted approaches seem to offer the greatest potential for long-term improvement. Treatments that combined emotion regulation with other aspects, such as pharmacological medication, were associated with greater symptom reductions. Ultimately, these findings emphasize the importance of integrating culturally receptive, emotionally focused, and multi-dimensional intervention techniques when addressing GAD in minority populations.

Although all four studies reported positive treatment outcomes, multiple limitations prevent definitive conclusions from being drawn. The studies differed in their intervention methods, participant populations, and study designs. Because these interventions were evaluated in different populations and settings, it is difficult to discern which treatment components significantly contributed to the observed improvements. Additionally, the evidence regarding GAD interventions among ethnic minority populations remains limited. Sample sizes were small across all four studies, and participant demographics varied substantially. While some studies focused on specific ethnic minority populations, others described participants simply as "ethnically diverse," limiting comparisons across studies. Furthermore, differences in follow-up periods and outcome measures make it difficult to compare long-term treatment effectiveness between interventions.

Despite these limitations, the reviewed studies indicate that adapting existing GAD treatments to better reflect the needs of ethnic minority populations may improve treatment outcomes. However, because the evidence base remains small, additional research is needed before definitive conclusions can be made regarding the most effective intervention strategies for ethnic minority populations. Although the available evidence remains limited, the four reviewed studies show several promising intervention components. Based on these findings, key aspects of ERT, culturally adapted CBT, pharmacological treatment, and MI may be combined into an intervention model for GAD among ethnic minority populations. The following intervention model is proposed as a potential framework for future research:

First, patients should be introduced to a motivational engagement phase, using MI to foster a deeper connection between the patient and therapist. This addresses potential roadblocks such as cultural perception and suspicion toward GAD treatment, which are prevalent among minority populations. This preliminary stage would strengthen patient engagement, establish a strong foundation for subsequent treatment phases, and improve long-term outcomes.

After MI, adapted ERT should be the primary focus of this potential intervention method. This would involve educating patients on how to identify, respond to, and regulate GAD-related emotions in a methodical approach. In a culturally adapted structure, ERT would be modified to reflect the values, stressors, and communication forms of the patient's cultural environment. For instance, therapists can include discussions that center around issues related to ethnic minority groups such as discrimination and socioeconomic difficulties. By integrating these key aspects, the treatment becomes more effective and reliable. Ultimately, adapted ERT helps patients manage difficult emotions and build resilience, allowing them to lead more fulfilling lives.

Some cases may require pharmacological treatment to produce more favorable outcomes. The option of combining venlafaxine XR with therapy should be considered, as this combined approach showed promising results in minority groups. Pharmacological treatment may be beneficial for individuals with severe GAD symptoms who require additional assistance to fully engage in ERT.

CONCLUSION

MI, ERT, culturally adapted CBT, and pharmacological treatment have all shown promise in treating GAD among minority populations. MI focuses on

addressing cultural mistrust associated with mental health treatment, allowing for greater engagement and positive results. ERT equips patients with skills that allow them to manage distressing emotions, reducing the symptoms of GAD. Culturally adapted CBT modifies traditional CBT elements to better align with the values, experiences, and communication styles of ethnic minority groups, increasing the likelihood of successful treatment outcomes. Pharmacological treatment, when combined with other intervention methods, may improve treatment efficacy. Collectively, these findings suggest that culturally adapted interventions may help reduce disparities in healthcare.

Future research should prioritize combining aspects of MI, ERT, culturally adapted CBT, and pharmacological treatment into a single intervention to determine whether this approach improves treatment outcomes for minority groups. Additionally, more research is needed to observe the long-term effectiveness of culturally adapted treatments and identify which adaptations result in successful treatment outcomes. Combining aspects of these intervention methods may contribute to the development of GAD treatment models that are effective for ethnic minority populations.

ACKNOWLEDGEMENTS

The author thanks Esteban G. Ortiz of Duke University for his guidance during the preparation of this manuscript.

CONFLICT OF INTEREST

The author declares that there are no conflicts of interest regarding the publication of this article.

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