

Hello everyone,

Week 6 Discussion: Community-Based Participatory Research

My initial PICOT question is: In immigrant and refugee adults in the U.S. with depression (P), does receiving culturally tailored mental health services (I) compared to standard mental health services (C) result in a greater reduction in depression severity scores (O) after 12 months of treatment (T)?

Goals of the Research

The primary goal of this community-based participatory research study is to evaluate in collaboration with the community the effectiveness of culturally tailored mental health services as compared to standard care in reducing depression severity scores over 12 months among immigrant and refugee adults. The first secondary goal is to identify structural, social, and cultural barriers¹ to mental health care engagement among the aforementioned populations. The second secondary goal is to co-develop sustainable, culturally appropriate mental health strategies with the community to improve access and engagement in the long-term.

Given the broad scope of the PICOT question, which focuses on all immigrant and refugee adults in the United States, the study will initially focus on a pilot phase. The chosen target population is Latinx immigrants and refugees. This choice is informed by CBPR principles² on enabling deep, sustained engagement with the community. This will help foster trust, ensuring that cultural tailored interventions are co-developed with community members through an active community advisory board. Latinx communities represent a large segment of the local immigrant population and experience disproportionately high rates of untreated depression.^{1,3} The Latinx community also has established infrastructure for partnership, including bilingual promotoras and trusted community health organizations.¹ Moreover, focusing on a single group through a pilot phase enhances feasibility, allows for a more precise assessment of recruitment, retention, acceptability, and fidelity. In addition, a pilot phase facilitates the collection of preliminary effect size estimates on depression severity reduction. Despite limited generalizability, the lessons learnt as well as documented adaptation processes from this pilot study will inform the systematic expansion of the intervention to more immigrant and refugee populations in future expanded trials. This will help maintain fidelity to the broader aims of the PICOT question while ensuring interventions are culturally and contextually relevant.

Community Partners

For this pilot phase, community engagement will focus on Spanish-speaking Latinx immigrant and refugee communities to ensure cultural and linguistic tailoring of the intervention while maintaining feasibility. Key community partners will include:

- Local Latinx immigrant and refugee community organizations such as cultural centers, advocacy groups, and faith-based institutions.
- Spanish-speaking community health workers (CHWs) and bilingual mental health providers with experience serving Latinx clients.
- Primary care and behavioral health clinics with a strong Latinx patient base.
- Academic researchers with expertise in mental health disparities among immigrant and refugee populations, particularly Latinx communities.

- Latinx community representatives serving on the Community Advisory Board (CAB) with lived experience of depression who can provide authentic input throughout the research process.

Consistent with CBPR principles, and to ensure that this research study addresses the community's concerns and priorities, all partners will be engaged as equal collaborators from the earliest stages of research design through data collection, interpretation, and dissemination.

Research Methods

This research study will employ a mixed-methods CBPR design:

- The quantitative component will be carried out through a randomized controlled trial (RCT) design. It will compare depression severity (measured by Patient Health Questionnaire-9 (PHQ-9) scores) between the culturally tailored group vs. standard care group over 12 months.
- The qualitative component will be conducted via focus groups and in-depth interviews with participants, CHWs, and providers to explore perceived barriers, facilitators, and the suitability/cultural relevance of mental health services provided.

To establish a suitable pilot phase culturally tailored intervention, I will work collaboratively with key participants. This intervention will include:

- Therapy sessions will be conducted in Spanish by bilingual, culturally competent providers
- Relevant cultural beliefs, values, and practices will be integrated into treatment approaches
- CHWs will serve as patient navigators to assist with healthcare navigation and connecting them to resources
- To foster a supportive environment, family-inclusive mental health education sessions will be encouraged

Participants

Target Population: Foreign-born Latinx adults, aged 18–65, diagnosed with moderate to severe depression (PHQ – 9 score ≥ 10),⁴ and currently receiving health care services through primary care or a mental health clinic.

- Inclusion Criteria: Self-identify as Latinx or Latino/a, foreign-born (immigrant status), fluent in English or Spanish, willing and able to participate in a 12-month study period, not currently receiving psychiatric treatment (e.g., no active medication or psychotherapy for depression).
- Exclusion Criteria: Diagnosis of severe mental illness (such as schizophrenia, schizoaffective disorder, or active psychosis), bipolar disorder, active substance use disorder (within the past 6 months), suicidal ideation with imminent risk or requiring emergency intervention, concurrent participation in another clinical trial or psychotherapy study.

Sample Size

Quantitative Component:

To determine the minimum sample size, a power analysis was conducted using G*Power 3.1. The minimum sample size needed to detect a medium effect size between these two independent groups using a t-test (two-tailed) was based on the following parameters:

- Effect size (Cohen's d) = 0.50 (medium), based on existing evidence demonstrating moderate clinical improvements in similar interventions.^{4,5,6}
- Alpha (α) = 0.05
- Power ($1-\beta$) = 0.80
- Statistical test: Two-tailed independent samples t-test

Based on these parameters, the minimum required sample size is 64 participants per group, for a total of 128 participants. To account for an anticipated attrition rate of 20%, which is commonly observed in longitudinal psychotherapy trials,^{7,8} the total participant recruitment target will be 160 participant or 80 per group.

Qualitative Component:

Purposive sampling will be used to ensure diversity in national origin, language, gender, and immigration status such as asylum seeker, refugee, or economic migrant, time lived in the U.S., and level of mental health service engagement. The study will target a sample size of 20 participants. This sample size is well supported as adequate for reaching thematic and meaning saturation by existing evidence^{9,10,11} on qualitative studies that apply semi-structured interviews and focus groups in exploring personal experiences and barriers among relatively heterogeneous populations, such as immigrants and refugees.

Recruitment

Participants will be recruited through peer referrals and platforms such as community mental health clinics, immigrant-serving NGOs, faith-based organizations such as churches, and refugee resettlement agencies. The study will use recruitment material and techniques in both English and Spanish such as flyers, provider referrals, and social media campaigns. To obtain informed consent prior to commencement of the study, bilingual research staff will provide culturally appropriate informed consent forms.

Data Collection & Instruments

Quantitative Data Collection:

Data will be collected using the Patient Health Questionnaire-9 (PHQ-9) score. It will be available in both English and Spanish. Both English¹² and Spanish¹³ versions have been validated for use among Latinx populations.^{14,15,16} The PHQ-9 score is a validated, quantitative tool that is brief, easy to administer, and widely used in both clinical and research settings.⁴ It is therefore suitable in the assessment of the severity of depression symptoms. It includes 9 items, with each scored from 0 to 3, for a total possible score of 0 to 27. Higher scores indicate more severe depressive symptoms and v/v. PHQ-9 scores are continuous, making them suitable for parametric testing.

The primary outcome will be the change in PHQ-9 score from baseline to 12 months. Additional measurements at 3, 6, and 9 months will help observe trends over time. This measure will allow for collection of precise, standardized, and statistically analyzable data for comparison of depression symptoms between the intervention vs control groups.

- Independent Variable: This will be the type of intervention (Group 1: Culturally tailored mental health intervention; Group 2: Standard mental health intervention). This variable is categorical (nominal).
- Dependent Variable: Change in depression severity (PHQ-9 scores). This variable is continuous.

Qualitative Data Collection:

To capture in-depth perspectives from participants, community health workers, and providers regarding the acceptability, cultural appropriateness, and perceived effectiveness of the intervention, the qualitative component of this mixed-methods research study will use semi-structured interviews and focus groups as the data collection instruments.^{9,10,11}

A. Semi-structured interviews:

Each interview will be approximately 45–60 minutes long and will be conducted by trained bilingual, culturally competent interviewers who are and familiar with norms and practices among the Latinx community. They will follow an open-ended format which will be co-developed with the community advisory board to ensure questions are culturally sensitive and relevant. Core topics will include perceived barriers to accessing mental health care before and during the intervention, experiences with culturally tailored components (such as language-concordant therapy and family involvement), trust in providers, and perceived changes in depression symptoms and daily functioning. Interviews will also explore participants' recommendations for improving intervention delivery and their perspectives on how such programs could be adapted for other immigrant and refugee populations. All interviews will be audio-recorded (with consent), transcribed verbatim, and translated into English where applicable.

B. Focus groups:

Each focus group will consist of 5 to 8 participants, stratified where possible by age group or gender to encourage open discussion and minimize power dynamics. They will be facilitated by a bilingual moderator and a note-taker. Questions will be designed to elicit collective perspectives on an intervention's cultural relevance, accessibility, and perceived impact. These group settings will also provide a space for participants to share community-level insights, such as systemic barriers, stigma, or family dynamics that may influence engagement in mental health care. Sessions will be audio-recorded and transcribed, and field notes will capture non-verbal cues, tone, and group interactions that may influence interpretation.

All qualitative sessions will be conducted in either Spanish or English, with certified interpreters available wherever necessary. Bilingual facilitators will receive training in trauma-informed interviewing techniques to ensure sensitive handling of emotionally charged topics. This qualitative approach will allow for both individual-level and community-level perspectives to emerge, providing a rich contextual understanding that will help interpret the quantitative findings and guide adaptation for broader immigrant and refugee populations.

Data Analysis

Quantitative Data Analysis:

- Descriptive statistics for baseline demographics and PHQ-9 scores at 3, 6, 9, and 12 months

- Independent samples t-tests to compare mean PHQ-9 scores between groups at each time point

Qualitative Data Analysis:

Transcripts obtained from semi-structured interviews and qualitative data from focus groups will be analyzed using NVivo software. This is an excellent tool for systematic coding and organization.¹⁷ Data analysis will follow a qualitative content analysis framework as outlined by Erlingsson & Brysiewicz.¹⁸

1. Data Familiarization

- Academic researchers and trained community co-coders will read transcripts multiple times, engaging in the hermeneutic spiral to deepen understanding and remain grounded in participant narratives.
- Field notes from focus groups and interviews will be integrated to capture contextual cues such as tone, group dynamics, and emotional expressions.

2. Meaning Units & Condensation

- Text will be divided into meaning units directly related to the research question (barriers to mental health access and proposed solutions).
- Meaning units will be condensed while preserving their core meaning to ensure clarity and manageability in the coding process.

3. Coding

- Initial codes will be developed jointly by academic researchers and trained community co-coders to enhance reflexivity and minimize bias.
- Codes will be iteratively refined through regular coding meetings and constant comparison until consensus is reached.
- It is anticipated that distinct code families will emerge for (a) barriers to accessing culturally appropriate mental health services and (b) participant-identified solutions or improvements.

4. Categories & Themes

- Codes will be organized into higher-order categories and thematic clusters that reflect both individual-level and systemic-level factors.
- Separate analyses will be conducted for interviews and focus groups initially to preserve the integrity of each data source.
- Themes from both datasets will then be compared and integrated to capture converging and diverging perspectives.

Both common patterns and outlier experiences will be examined to ensure that findings reflect the range of participant perspectives. Special attention will be given to differences that emerge between focus groups (collective perspectives) and individual interviews (personal narratives). In addition, direct quotes will be included in the final reporting to safeguard authenticity and ensure participants' voices are represented in their own words. A clear codebook with definitions will be maintained to improve transparency

and reproducibility. Community partners will be engaged in member-checking sessions to validate interpretations and refine themes before finalizing results.

Finally, qualitative findings will be triangulated with quantitative outcomes to provide a more nuanced understanding of the impact of an intervention as well as to ensure that both halves of the research question (barriers and tailored solutions) are fully addressed.

Ethical Considerations

This study will adhere to rigorous ethical standards to protect participants' rights, dignity, and well-being. Informed consent will be obtained in each participant's preferred language, using plain-language forms, and verbal explanations to ensure comprehension. Given the sensitive nature of mental health and immigration-related topics, all interviews and focus groups will be conducted in private, safe settings to reduce stigma and protect confidentiality. Participant identities will be safeguarded through the use of coded identifiers, secure data storage, and the separation of identifying information from research data. Given the CBPR framework, community partners will be fully involved in the design of recruitment, consent, and data collection procedures to ensure cultural appropriateness and participant approval. All research staff, including community co-coders and interpreters, will receive training in trauma-informed approaches, cultural humility, and confidentiality protocols. Finally, results will be shared with participants, the community advisory board, and the broader community in accessible, bilingual formats, with an emphasis on actionable recommendations that can be implemented beyond the study period.

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