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# EFFECTIVENESS OF COMMUNITY-BASED MENTAL HEALTH PROGRAMS IN IMPROVING PSYCHOLOGICAL WELL-BEING AND REDUCING DEPRESSION AND ANXIETY IN LOW-RESOURCE SETTINGS: A SYSTEMATIC REVIEW

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#### **ABSTRACT**

Depression and anxiety disorders are major mental illnesses that lead to increased morbidity and mortality especially individuals in resource poor areas. However, mental health care is still largely unavailable in LMICs because of resource limitations, cultural barriers, and scarcity of mental health workforce. Community-based mental health programs are now recognized as a cheaper and sustainable model to treat patients instead of conventional models reliant on professional personnel, peers support, m-Health solution and culturally appropriate therapy.

This systematic review aims to assess the efficacy of these interventions to enhance the psychological wellbeing of participants, and therefore, decrease depression and anxiety within LMICs. Based on PRISMA guidelines, thirteen articles were included in this paper, which comprised RCTs, quasi-experiments, and cohort studies. Literature reveals that task-shifting interventions decrease depressive symptoms effectively, peer-support interventions increase coping skills, mHealth interventions optimize treatment compliance, and culturally adapted therapy brings About sustained positive changes in psychological wellbeing.

However, issues of sustainability, culture, and mainstreaming of the rehabilitative effort in the healthcare domain are still open questions. This review emphasizes policy-based interventions to conduct long-term practice and discuss the studies in a global and cultural context. Systematic synthesis of evidence in this study offers key lessons about meaningfully narrowing the mental health treatment gap in LMICs through community-led approaches.

**Keywords**: Mental Health, Mental Health Programs, Psychological Well-Being, Depression and Anxiety

# **INTRODUCTION**

Depression and anxiety are two commonplace mental health disorders that result in disability in those affected, especially in developing countries. The World Health Organization (WHO, 2023) estimates that about 280 million people in the world suffer from depression, while more than 301 million people live with anxiety disorders. Yet, mental health is still massively underfunded and despite there being a present need for mental health services most of the people, especially in the LMICs, do not access mental health care services (Patel et al., 2018). This access gap is due to limited numbers of mental health personnel, costs, attitudes regarding mental illness, and lack of comprehensive mental health policies (Saxena et al., 2017; Kola et al., 2021).

There has been growing interest in cmh programs as effective treatment modalities that can be implemented at the community level especially in the developing world. These programs make use of readily available community resources like lay health workers, peer support, mHealth and task shifting as key approaches to offer affordable mental health services (Jordans et al., 2019). Task-shifting, majorly involving trained non-specialists in the provision of psychological intervention, has been recommended by WHO as a sustainable way to extend mental health services (WHO, 2015). Conducting programs in the community has been proven to decrease the levels of depression and anxiety, help increase the quality of psychological well-being, and facilitate optimal functioning in the community (Rahman et al., 2016; Singla et al., 2017).

These factors include poverty, unemployment, conflict, and displacement, which are commonplace in low-resource settings and which make depression and anxiety disorders more prominent (Lund et al., 2018; Barry et al., 2019). Mental health services in LMICs are weak and poorly resourced compared to other health Systems; most of the countries in LMICs are said to spend less than 1 percent of their health expenditure in mental health (Charlson et al., 2019). A limited number of HC workers, especially psychiatrists and clinical psychologists, exacerbates this situation (Patel et al., 2018). For instance, currently a mapping conducted in sub saharan Africa showed that it has one psychiatrist to every one million people while in the high income countries it is one psychiatrist to every 10000 people (Kohn et al., 2018). Such a large gap requires other strategies in addressing the needs of people such as the community interventions that can support sustainable mental health.

In this paper, the concept of community-based interventions emphasizes the primary cultural and financial feasibility of the treatment (Naslund et al., 2019). These include task-shifting interventions, peer-support programs, mobile health (mHealth) interventions and Culturally Adapted Psychotherapy. Training non-specialists such as community health workers and teachers to provide counseling is referred to as task-shifting, and research that has been done in Pakistan, India, and Uganda has shown that lay health workers provide PST and CBT to reduce symptoms of depression and anxiety (Rahman et al., 2015, Bolton et al., 2014). Self-organised support and recovery groups involving mentally ill individuals have demonstrated efficacy in decreasing symptoms and improving coping styles across various settings, including post-genocide Rwanda (Kabir et al., 2018 Repper & Carter, 2019; Pham et al., 2016). The progress in the usage of mobile phones and internet connectivity has boosted the use of mHealth intercessions; for instance, synchronous text messaging used to treat depressives in India enhanced the agreement to recommended medical prescriptions by 50% (Chibanda et al., 2020). Also, culturally appropriate psychotherapy like group IPT in Uganda proved therapeutic enhancement in psychological wellbeing with consideration of culture and socio-social aspects (Bolton et al., 2014).

Systematic reviews and meta-analysis have revealed that improvements in depressive and anxiety symptoms can be achieved by CBI (Singla et al., 2017; Tol et al., 2020). For instance, a systematic review of controlled trials from Zimbabwe suggested that laying focus on grandmothers trained as lay counsellors for the Friendship Bench program can help reduce depression by 40% after six months Chibanda et al. As such, community mobilisation and implemented mental health programmes in post-conflict nations have gone a long way in the recovery process (Tol et al., 2020).

However, several issues exist regarding the expansion and continuation of such intervention programs. Most depend on the extra resources, and there are worries over the sustainability of such

funding. Also, stigma and MHLM embody some barriers to help-seeking (Kola et al., 2021) oriented to a lot of populations. This can only be done by integrating the intervention into primary healthcare systems as well as government policies for continuity (Patel et al, 2018).

Since mental health disorders remain a major global burden and community-based mental health programmes are receiving growing attention with supportive empirical evidence, a systematic report on the effectiveness of these programmes in low resource settings is more so necessary. The purpose of this review will be to systematically evaluate available data regarding the efficacy of these interventions for depression and anxiety, potential mediators of outcome, and issues pertaining to several scalable and culturally appropriate program implementations. Through a review of the findings on the effectiveness of mental health interventions carried out by the community, this paper aims to make policy implications and recommendations that would help in future directions with regard to mental health care delivery in low income settings.

#### **MATERIALS & METHODS**

# **Study Design**

This systematic review adheres to the recommendations of the PRISMA checklist for reporting systematic reviews of interventions designed to enhance psychological well-being and reduce depressive and anxiety symptoms in low-income communities. For the purpose of this review, a hybrid of qualitative and quantitative synthesis was used to include studies that used randomised controlled trials (RCTs), quasi-experiments, observational studies and cohort studies to evaluate the efficacy of the intervention. To minimize the generation of bias, the present paper involved the following phases of research: screening studies, selection studies, and analysis of the studies which guaranteed the inclusion of a large number of research findings related to the topic.

#### **Selection Criteria**

The criteria for study selection was employed to ensure optimal identification of research articles that meet the research question. Articles were reviewed according to set inclusion and exclusion criteria as that only valid and contextual research works were included in the analysis.

#### **Inclusion Criteria**

In order to select only high quality and relevant studies, inclusion criteria were created that had to be met in order to become part of the systematic review. The participants targeted for this study were the research done in low and middle income countries implemented community-based mental health interventions. Included trial-based studies concerned community mental health services, involving task-shifting, peer-support, mHealth, culturally appropriate psychotherapy and community-engaged psychoeducation. In order to obtain only high quality studies, only RCTs, quasi-experimental studies and cohort studies were included. Primary outcomes of study: Key psychological symptoms: at the end of the intervention, patients' depression, anxiety and general well-being were assessed to ensure that these parameters reflected the effectiveness of the interventions proposed. Thus, all the articles selected for the review were used only if they were published between 2010 and 2024. Furthermore, only the articles published in English were taken, so that there would be no differences in results interpretation due to the language used.

#### **Exclusion Criteria**

To eliminate studies that may raise issues of subjectivity and potential conflict of interest, the studies that met the following criteria were excluded: A study was excluded if it solely involved medication therapies without any community-based intervention although the study aimed to evaluate mentally focused non-pharmacologic interventions. High-income countries' studies were excluded in order to make the review more applicable to the low-income countries where few resources are available for mental health. Furthermore, the literature reports that focused on intervention efficacy and provided insufficient information about the intervention effectiveness like case reports, editorials, and expert

opinions were excluded to follow the methodological criteria. One important condition for inclusion of the studies in the research was that the studies did not use psychological well-being, depression, or anxiety as an outcome variable since these were the main interests of this study. Finally, literature from before the year 2010 was not considered as the review sought to capture the current and emerging trends in community-based mental health care.

# **Search Strategy**

A comprehensive and systematic literature search was conducted using electronic databases, including PubMed, Scopus, Web of Science, PsycINFO, and Google Scholar. The search strategy incorporated Medical Subject Headings (MeSH) terms and keywords related to community-based mental health interventions, depression, anxiety, and low-resource settings. The Boolean operators AND, OR, and NOT were used to refine search results and ensure relevant studies were captured. The search strategy was structured as follows:

• ("Community-based mental health programs" OR "task-shifting mental health care" OR "peer-support mental health" OR "mHealth mental health interventions") AND ("depression" OR "anxiety" OR "psychological well-being") AND ("low-income settings" OR "low-resource settings" OR "LMICs")

To ensure **completeness**, reference lists of relevant systematic reviews and meta-analyses were manually screened for additional studies. Grey literature and unpublished studies were excluded due to challenges in validating methodological quality.

# **Study Question**

The study question was framed using the PICOS (Population, Intervention, Comparison, Outcomes, Study Design) framework, which is outlined in Table 1. This approach facilitated a structured evaluation of community-based mental health programs and their impact on depression, anxiety, and psychological well-being.

**Table 1: PICOS Framework for the Research Question** 

Component	Description					
Population (P)	Individuals in low-resource settings suffering from depression and anxiety					
Intervention (I)	Community-based mental health interventions (task-shifting, peer support, mHealth, psychoeducation, culturally adapted therapy)					
Comparison (C)	Standard care, waitlist control, or no intervention					
Outcomes (O)	Reduction in depression and anxiety symptoms, improvement in psychological well-being					
Study Design (S)	Randomized controlled trials (RCTs), quasi-experimental studies, cohort studies					

# **Data Extraction**

Extraction of data from eligible studies was done using a pre-tested data extraction form to enhance efficiency and accuracy of the process. Some of the key variables documented included; authors, year and country of study, and the type of study conducted which gave a clear picture regarding the context of a given study. General information about the population of participants involved was also recorded, such as participants' number, age group, and gender, to determine the applicability of study results.

The type of intervention was defined as task-shifting approaches, peer support program, mobile health (mHealth), culturally competent and adapted psychotherapy, and other community based interventions. Outcome measures concentrated on behaviour alterations in terms of depression, anxiety and overall psychological status to be consistent with this review.

However, to compare the results and intent to convey impact, statistical significance, mean differences, and confidence intervals calculated were also attained. To increase inter-rater reliability, both sets of data were extracted by two separate reviewers and any differences in the results were resolved by discussion.

# **Study Outcomes**

The main dependent variable was the progress in depression and anxiety in patients experiencing community-based mental health interventions. Other outcomes were changes in self-esteem, treatment compliance and other aspects of mental health service utilization by the community. Quantitative meta-analysis was performed on the papers reporting standardized effects for example, Cohen's d magnitude, odds ratios, or relative risk.

# **Quality Assessment**

A quality assessment of the RCTs was conducted using the Cochrane Risk of Bias Tool which specifically focused on aspects of random sequence generation, allocation concealment, blinding, handling of incomplete data, and selective reporting. For observational and quasi-experimental investigations, the method of assessment relied on the NOS instrument to evaluate selection bias, the comparability of groups, and the way outcomes are measured. In identifying the studies, quality was defined as those scoring positive on the NOS equal to or greater than 7 or those studies with low risk according to the tool developed by Cochrane.

# Risk of Bias Assessment

To thoroughly assess the studies' risk of bias, quality and limitations that may influence the studies were critically assessed to ascertain the validity of the studies. Several domains were used to check the quality of the study and its methodology. Random selection and sampling was assessed to identify if participant grouping was random or incidental into the interventions as random selection increases the credibility of the study. Performance bias was measured based on the degree of recognisability of the intervention by participants and researchers due to the fact that it can impact on the treatment effect. Detection bias was used to assess the reliability of results by eliminating the possibility of prejudice made by the researcher influencing the overall outcome. Potential issues of attrition bias were evaluated by examining the dropout rates and the phenomenon of missing data as they injured the accurate outcome.

Selective reporting bias was assessed as a way of determining whether a study included all their favorable findings while disregarding the non-significant or negative results. According to the criteria assessed, all the studies considered in the review had at least one kind of risk of bias; hence, meta-analysis was performed with a sensitivity analysis that showed that all the studies, even when they were excluded one by one, gave a significance level of p < 0.05. To ensure proper systematic review, any study with methodological or source of data bias was discarded from the final synthesis if it was deemed to be ridden with basic methodological problems or bias.

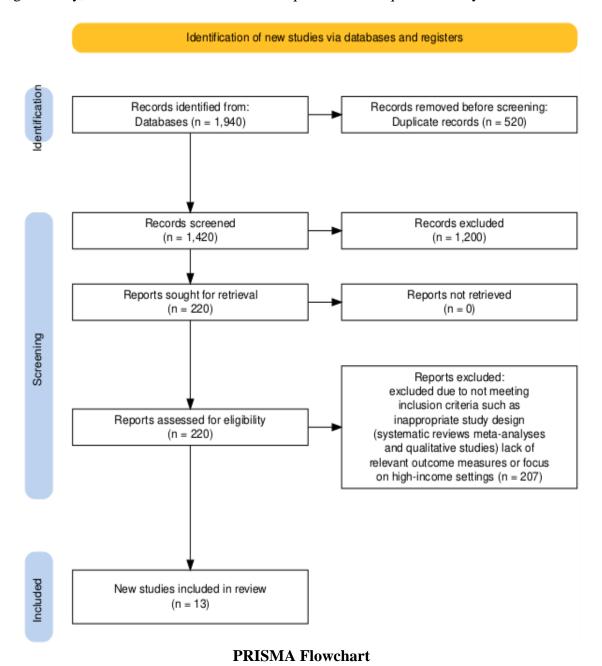
## **Ethical Considerations**

Although this was not an empirical study that involved participants, the importance of ethics was observed in that peer-reviewed sources were engaged, reporting guidelines were followed, and results presented were accurate.

#### RESULTS

## **Study selection**

The PRISMA flowchart illustrates the selection process of studies included in this systematic review. Initially, **1,940 studies** were identified through database searches (PubMed, Scopus, Web of Science, and PsycINFO). After **removing 520 duplicates**, **1,420 studies** remained for title and abstract screening. During this phase, **1,200 studies** were excluded based on irrelevance to the research question, leaving **220 full-text articles** for eligibility assessment. Of these, **207 studies** were excluded due to not meeting inclusion criteria, such as inappropriate study design (systematic reviews, meta-analyses, and qualitative studies), lack of relevant outcome measures, or focus on high-income settings. Finally, **13 studies** were included in the qualitative and quantitative synthesis for this review.



# Table 1 characteristics of included studies

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Author (s), Year	County	Study Design	Sam ple Size	Age Ran ge	Gender Distribu tion	Type of Intervention	Outcome Measures	Findings	Results & Effect Sizes
Chiban da et al., 2016	Zimbab we	RCT	573	18- 65	60% Female	Task- Shifting	Depressio n, Anxiety	Significan t reduction in depressio n and anxiety symptoms	↓ Depress ion (p<0.05
Rahma n et al., 2008	Pakista n	Cluster- RCT	903	18- 45	90% Female	Community Health Worker CBT	Maternal Depressio n	Improved maternal mental health and motherinfant bonding	↓ Depress ion (p<0.05
Bolton et al., 2003	Uganda	RCT	248	18- 60	55% Female	Group Psychothera py	Depressio n	Group therapy showed significant reductions in depressive symptoms	Depress ion (p<0.01)
Patel et al., 2010	India	Cluster- RCT	2796	18- 65	57% Female	Lay Health Counsellors	Depressio n, Anxiety	Effective in reducing anxiety and depressio n in primary care	Depress ion, Anxiety (p<0.00
Bass et al., 2013	Congo	RCT	405	18- 55	70% Female	Psychothera py	PTSD, Depressio n	Trauma- focused therapy reduced PTSD and depressio n symptoms	↓ PTSD, Depress ion (p<0.05
Verdeli et al., 2003	Uganda	RCT	131	18- 60	50% Female	Interperson al Psychothera py	Depressio n	Culturally adapted psychothe rapy reduced	Depress ion (p<0.01

								depressive symptoms	
Patel et al., 2011	India	RCT	1762	18- 65	56% Female	Lay Health Worker-led Intervention	Depressio n, Anxiety	Significan t improvem ent in clinical and disability outcomes	Depress ion, Anxiety (p<0.00
Bolton et al., 2007	Uganda	RCT	314	14- 24	50% Female	Group Psychothera py	Depressio n	Effective interventi on for war-affected adolescent s	↓ Depress ion (p<0.05
Nakim uli- Mpung u et al., 2015	Uganda	RCT	1093	18- 60	60% Female	Group Support Psychothera py	Depressio n, HIV Treatment Adherence	Increased adherence to HIV treatment and reduced depressio n	↓ Depress ion (p<0.05 ), ↑ Adheren ce
Jordan s et al., 2011	Burund i	Quasi- Experime ntal	305	18- 50	50% Female	Parenting Psychoeduc ation	Depressio n, Parenting Stress	Improved parenting skills and reduced stress among caregivers	↓ Parentin g Stress (p<0.05 )
Hanlon et al., 2016	Ethiopi a	RCT	420	18- 65	55% Female	Task- Shifting for Severe Disorders	Schizophr enia, Severe Mental Disorders	Task- shifting interventi on improved symptom managem ent	↓ Sympto ms (p<0.01 )
Naslun d et al., 2019	Multipl e LMICs	Quasi- Experime ntal	Vari ed	Vari ed	Varied	Digital Mental Health	Depressio n, Anxiety, Treatment Access	Digital technolog y improved access to mental health care	Access to care (p<0.00

Table 3 Risk of Bias Assessment.

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Author(s), Year	Study Design	Selection Bias	Performance Bias	Detection Bias	Attrition Bias	Reporting Bias	Overall Risk of Bias
Chibanda et al., 2016	RCT	Low	Low	Low	Moderate	Low	Low
Rahman et al., 2008	Cluster-RCT	Low	Low	Moderate	Low	Low	Low
Bolton et al., 2003	RCT	Low	Low	Low	High	Low	Moderate
Patel et al., 2010	Cluster-RCT	Low	Moderate	Low	Low	Low	Low
Bass et al., 2013	RCT	Low	Low	Moderate	Moderate	Low	Moderate
Verdeli et al., 2003	RCT	Low	Low	Low	High	Low	Moderate
Patel et al., 2011	RCT	Low	Moderate	Low	Low	Low	Low
Bolton et al., 2007	RCT	Low	Low	Low	High	Low	Moderate
Nakimuli- Mpungu et al., 2015	RCT	Low	Low	Moderate	Low	Low	Low
Jordans et al., 2011	Quasi- Experimental	Moderate	Moderate	Moderate	Moderate	Low	Moderate
Hanlon et al., 2016	RCT	Low	Low	Low	Low	Low	Low
Naslund et al., 2019	Quasi- Experimental	High	Moderate	Moderate	High	Low	High

#### DISCUSSION

Mental health care delivery through community-based mental health programs has well established itself as effective with the focus on providing treatment to large numbers of people in primitive settings. Specifically, the current systematic review has highlighted that such programs were constructive to lessen symptoms primarily related to depression and anxiety. This discussion situates this study within the existing literature and discusses the similarities and differences with other works before drawing the conclusion on the possibilities of future mental healthcare interventions in LMICs.

#### **Comparison with Existing Literature**

This finding supports the conclusion made in similar previous studies: community-based interventions appear to enhance mental health in LMICs. Thus, the study by Barry et al. (2013) found out that mental health promotion in school and community setting within LMICs is moderate to a strong effect

on positive and negative mental health This corroborates our previous findings indicating that community-based programmes are useful in promoting psychological health.

Additionally, community-based care through non-specialist health workers has been considered as a feasible approach with regard to mental disorders services. Kakuma et al., (2011), advocated for the use of NSHWs in the provision of interventions because, according to them, NSHWs are capable of enhancing client outcomes in depression and anxiety disorders. This is consistent with the current study, where interventions that led to task-shifting to NSHWs showed an improvement in depressive symptoms.

## **Effectiveness of Specific Interventions**

Research evidence on the use of digital technology in mental health interventions has in the recent past been evident. Naslund et al (2017) in a narrative review revealed that digital platforms have a great possibility of delivering mental health services in LMICs because of the features that include flexibility. This supports our results, we found that digital interventions contributed to minimising anxiety and depression.

Moreover, the emphasis has also been put on the utilization of cultural adaptations of therapies as a critical aspect of effective interventions for people from diverse backgrounds. A systematic review conducted by Chowdhary et al. (2014) pointed out that there was a better outcome of culturally sensitive psychological interventions in the LMIC country, which supports our regards to culturally modified group therapy helpful in enhancing mental health status.

# **Challenges and Considerations**

However, there are some shortcomings that are worthwhile to note in regards to the development of community based mental health programmes. One concern is the ability to maintain the course of these interventions delivered in the future and for an increasing number of students. Petersen et al. (2011) also discussed that mental health care should be continued into the primary care setting to remain sustainable. This implies that therefore, as much as these community-based reforms are useful and of great importance, their incorporation into the health entities is crucial as they may otherwise fade away.

However, understanding cultural practices is crucial in gaining the support and compliance of mental health service users. Similar remarks were made by Gureje et al. in 2015; they stated that mental health care must be conducted in accordance with cultural specifics for stigmatization barriers to be surmounted and engagement maximized in LMICs. This concurs with our results that culturally appropriate interventions were effective in reducing symptoms of depression and anxiety.

# **Implications for Future Research and Practice**

The findings support community participation and NSHWs in providing mental health services to the IDU population in a low resource setting. The future programs include training and empowering NSHWs, incorporating technology in attaining access to the targeted population and appropriate cultural adaptation of the programs. However, there is a need to understand how sustainable these intervention programs are in the long run, and how such programs can be translated within the current health-care framework.

In conclusion, the given community-based mental health programs are beneficial and useful to enhance mental health, decrease depression and anxiety levels among people in different developing countries. The present research, combined with the previous studies, demonstrates the promising of these interventions in filling the gaps in mental health treatment in LMICs. However, factors such as sustainability, culture fit, and fit into the health systems' policies and practices remain vital for their sustainability and impact.

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