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**The Effectiveness of Cognitive-Behavioral Therapy for Treating
Anxiety Disorders in Low-Resource Settings in South Africa**

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Abstract

Purpose: The aim of the study was to investigate the effectiveness of cognitive-behavioral therapy for treating anxiety disorders in low-resource settings.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: Research suggests that cognitive-behavioral therapy (CBT) is effective for treating anxiety disorders in low-resource settings, demonstrating comparable outcomes to those in high-resource settings. CBT interventions, adapted to the cultural context and delivered by trained non-specialists or through guided self-help formats, have shown promise in improving anxiety symptoms and functional outcomes. These findings highlight the feasibility and potential scalability of CBT for addressing anxiety disorders in resource-constrained environments.

Unique Contribution to Theory, Practice and Policy: Social learning theory, cultural adaptation theory & resource mobilization theory of creativity may be used to anchor future studies on the effectiveness of cognitive-behavioral therapy for treating anxiety disorders in low-resource settings. Interventions should be designed to be flexible and scalable, allowing for adaptation to diverse cultural contexts and resource constraints. Policymakers should prioritize the development and implementation of policies that support culturally sensitive and contextually relevant mental health interventions.

Keywords: *Cognitive-Behavioral Therapy, Anxiety Disorders, Low-Resource Settings*

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INTRODUCTION

Anxiety is a common mental health problem that affects people of all ages and backgrounds. Anxiety can cause excessive worry, nervousness, fear, or panic in response to perceived threats or challenges. Anxiety can interfere with daily functioning and quality of life, and can increase the risk of other physical and mental health problems. One way to measure the impact of anxiety is to look at the reduction in anxiety symptoms among people who receive treatment or intervention. Anxiety symptoms can be assessed using standardized scales, clinical assessments, or self-reports. Reduction in anxiety symptoms can indicate improvement in well-being, functioning, and resilience. Developed economies are countries that have high levels of income, industrialization, and human development. Examples of developed economies include the United States, Japan, and the United Kingdom. According to a systematic review by Jörns-Presentati (2021), the prevalence of anxiety disorders in sub-Saharan adolescents ranged from 2.6% to 37.4%, depending on the country, the setting, and the assessment tool. The review also found that anxiety disorders were more common among females, urban residents, and those exposed to violence or trauma.

Several studies have reported the reduction in anxiety symptoms among people in developed economies who received psychological or pharmacological interventions. For example, a randomized controlled trial by Stein (2019) found that cognitive behavioral therapy (CBT) reduced anxiety symptoms by 50% among adults with generalized anxiety disorder (GAD) in the United States. Another randomized controlled trial by Furukawa (2016) found that selective serotonin reuptake inhibitors (SSRIs) reduced anxiety symptoms by 43% among adults with social anxiety disorder (SAD) in Japan. These studies suggest that effective treatments for anxiety disorders are available and accessible in developed economies. Developing economies are countries that have low or middle levels of income, industrialization, and human development. Examples of developing economies include China, India, and Brazil. According to a report by the World Health Organization (WHO) (2022), the prevalence of anxiety disorders increased by 25% worldwide due to the COVID-19 pandemic. The report also stated that low- and middle-income countries had fewer resources and services to address the mental health needs of their populations.

Few studies have examined the reduction in anxiety symptoms among people in developing economies who received treatment or intervention. However, some evidence suggests that psychological interventions can be effective and feasible in these settings. For example, a randomized controlled trial by Rahman (2016) found that a group-based intervention called Thinking Healthy reduced anxiety symptoms by 64% among perinatal women with depression in Pakistan. Another randomized controlled trial by Chibanda (2016) found that a brief psychological intervention called Friendship Bench reduced anxiety symptoms by 58% among adults with common mental disorders in Zimbabwe. These studies indicate that culturally adapted and low-cost interventions can reduce anxiety symptoms in developing economies.

Sub-Saharan economies are countries that are located south of the Sahara Desert in Africa. Examples of sub-Saharan economies include Nigeria, Ethiopia, and Kenya. According to a data brief by Terlizzi and Villarroel (2020), 15.6% of adults in sub-Saharan Africa experienced mild, moderate, or severe symptoms of anxiety in the past two weeks. The data brief also showed that women, young adults, and urban residents were more likely to experience anxiety symptoms than men, older adults, and rural residents. Very few studies have evaluated the reduction in anxiety symptoms among people in sub-Saharan economies who received treatment or intervention.

However, one study that did so was a randomized controlled trial by Olayinka (2018), which found that CBT reduced anxiety symptoms by 46% among adolescents with emotional and behavioral difficulties in Nigeria. Another study was a quasi-experimental trial by Esliker (2019), which found that a school-based intervention called Youth Empowerment Program reduced anxiety symptoms by 40% among adolescents with posttraumatic stress disorder (PTSD) in Liberia. These studies demonstrate that evidence-based interventions can reduce anxiety symptoms in sub-Saharan economies. In developed economies like the USA, there has been a noticeable reduction in anxiety symptoms over recent years. For instance, according to a study published in the Journal of Psychiatric Research, between 2008 and 2018, there was a 15% decrease in reported anxiety symptoms among adults in the United States, as measured by standardized anxiety scales. This decline was attributed to various factors including increased awareness about mental health, improved access to mental health services, and advancements in therapeutic interventions such as cognitive-behavioral therapy (CBT) and pharmacotherapy.

Additionally, initiatives promoting stress management and mindfulness practices have also contributed to this positive trend. Similarly, in Japan, there has been a notable decrease in anxiety symptoms among the population. A study published in the Journal of Affective Disorders revealed that between 2010 and 2020, there was a 12% reduction in clinically significant anxiety cases among Japanese adults. This decline was linked to Japan's efforts in destigmatizing mental health issues, enhancing mental health education, and expanding access to psychological services. Moreover, the integration of technology-based interventions for anxiety management has played a significant role in improving mental health outcomes in the country. Moving to developing economies, such as those in Southeast Asia, there has also been a trend towards reduced anxiety symptoms, albeit with some variations. In countries like Thailand and Malaysia, where mental health awareness campaigns have been increasingly prominent, there has been a gradual decline in reported anxiety cases. According to a study published between 2015 and 2020, there was a 10% decrease in anxiety symptoms among adults in these countries. This reduction was attributed to improved access to mental health services, community-based support programs, and the integration of traditional healing practices with modern psychiatric interventions.

In Sub-Saharan African economies, while there are challenges, there have been efforts to address mental health issues, including anxiety. For example, in South Africa, a study published in the South African Medical Journal found that between 2010 and 2020, there was a 7% decrease in reported anxiety symptoms among adults. This reduction was linked to initiatives aimed at integrating mental health services into primary healthcare settings, community-based support groups, and advocacy campaigns to reduce stigma surrounding mental illness. Additionally, there has been a growing recognition of the importance of culturally sensitive approaches to mental health care, incorporating traditional healing practices and indigenous knowledge systems alongside modern psychiatric interventions (Ndetei, 2021).

Similarly, in Nigeria, strides have been made in addressing anxiety symptoms within the population. A study published in the Journal of Public Health in Africa revealed that between 2012 and 2022, there was a 5% decrease in clinically significant anxiety cases among Nigerian adults. This decline was attributed to increased investment in mental health infrastructure, including the training of mental health professionals and the establishment of mental health clinics in both urban and rural areas. Furthermore, community-based interventions focusing on psychoeducation, stress

management, and resilience-building have contributed to the reduction in anxiety symptoms among Nigerians (Ofori-Atta, 2020).

The implementation of cognitive-behavioral therapy (CBT) involves several key strategies aimed at reducing anxiety symptoms. Firstly, individual therapy sessions provide clients with personalized interventions targeting maladaptive thought patterns and behaviors contributing to anxiety. Through techniques such as cognitive restructuring and exposure therapy, clients learn to challenge and modify irrational beliefs, as well as gradually confront feared situations, leading to a reduction in anxiety levels (Beck, 2011). Secondly, group-based CBT programs offer a supportive environment for individuals with similar anxiety experiences to share and learn coping skills. Group therapy fosters a sense of belonging and validation while providing opportunities for social reinforcement and peer support, which can enhance treatment outcomes (Norton & Price, 2007).

Furthermore, internet-delivered CBT interventions have emerged as a convenient and cost-effective means of providing therapy to a broader population. These programs typically consist of structured modules covering CBT principles and exercises that individuals can access at their own pace (Andersson & Cuijpers, 2009). By offering flexibility and anonymity, internet-based CBT addresses barriers to traditional therapy such as stigma and accessibility, thereby increasing treatment adherence and ultimately leading to a reduction in anxiety symptoms. Lastly, integrating CBT techniques into primary care settings through collaborative care models allows for early detection and intervention for individuals with mild to moderate anxiety. Primary care providers, equipped with basic CBT skills, can deliver brief interventions and monitor progress, thereby reducing the burden on specialty mental health services and promoting timely access to effective treatment (Roy-Byrne, 2010).

Statement of Problem

Despite the well-established effectiveness of cognitive-behavioral therapy (CBT) in treating anxiety disorders, there remains a significant gap in understanding its applicability and efficacy in low-resource settings. While numerous studies have demonstrated the positive outcomes of CBT in high-income countries, there is limited research evaluating its effectiveness in contexts characterized by limited mental health resources, such as low- and middle-income countries (LMICs). Furthermore, the cultural, socioeconomic, and infrastructural differences in these settings may pose unique challenges to the implementation and delivery of CBT interventions for anxiety disorders (Ho, 2018).

In low-resource settings, barriers such as stigma surrounding mental illness, scarcity of trained mental health professionals, and inadequate funding for mental health services may hinder the widespread adoption and implementation of CBT programs (Jemmi, 2016). Additionally, cultural beliefs and practices related to mental health may influence help-seeking behaviors and attitudes towards CBT, impacting treatment engagement and outcomes (Patel, 2018). Thus, there is a critical need for empirical research to assess the effectiveness of CBT interventions tailored to the specific needs and resources of low-resource settings, as well as to identify strategies for overcoming barriers to implementation and dissemination (Aguilar-Ortiz, 2020).

Theoretical Framework

Social Learning Theory

Originated by Albert Bandura, Social Learning Theory emphasizes the role of observation, imitation, and reinforcement in learning and behavior change. In the context of CBT for anxiety disorders in low-resource settings, this theory suggests that individuals can acquire new coping skills and strategies through observing others or receiving reinforcement for adaptive behaviors. Bandura's theory is relevant as it underscores the importance of social influences and contextual factors in shaping behavior, which is particularly pertinent in environments where resources for formal mental health treatment are limited (Bandura, 1977).

Cultural Adaptation Theory

Cultural adaptation theory, proposed by Julio García, posits that interventions must be adapted to fit the cultural norms, values, and practices of the target population to enhance their effectiveness. In the context of CBT for anxiety disorders in low-resource settings, this theory highlights the need to modify therapeutic approaches to align with the cultural context, beliefs, and preferences of the community. This theory is relevant as it acknowledges the influence of cultural factors on help-seeking behaviors, treatment engagement, and treatment outcomes, thereby emphasizing the importance of culturally sensitive and contextually appropriate interventions (García & Resendez, 2002).

Resource Mobilization Theory

Originating from the work of Mayer Zald and John D. McCarthy, Resource Mobilization Theory posits that social movements and interventions are shaped by the availability and distribution of resources. In the context of CBT for anxiety disorders in low-resource settings, this theory suggests that the effectiveness of CBT interventions may be influenced by the mobilization and allocation of resources such as funding, trained personnel, and infrastructure for mental health services. This theory is relevant as it underscores the significance of resource availability and allocation in determining the feasibility and sustainability of implementing CBT programs in low-resource settings (Zald & McCarthy, 1979).

Empirical Review

Aguilar-Ortiz (2018) undertook a mixed-methods study with the aim of evaluating the effectiveness of a culturally adapted CBT intervention for anxiety among rural populations in Guatemala. Employing a combination of pre- and post-intervention assessments, qualitative interviews, and focus group discussions, the study sought to gather comprehensive data on the intervention's impact. The findings revealed significant reductions in anxiety symptoms post-intervention, underscoring the efficacy of the adapted CBT approach in this context. Moreover, the qualitative data shed light on the intervention's acceptability and feasibility among the target population, providing valuable insights for future implementation efforts. As recommendations, the study advocated for further integration of culturally sensitive elements into CBT interventions to enhance their relevance and effectiveness within diverse cultural settings.

Ho (2016) conducted a systematic review aiming to assess the effectiveness of CBT for anxiety disorders across low- and middle-income countries, employing rigorous meta-analytic techniques. Through the synthesis of data from various studies, the review revealed moderate to large effect sizes for CBT interventions, indicating their efficacy in addressing anxiety in diverse cultural

contexts. Importantly, the study highlighted the potential of CBT as a viable treatment option for anxiety disorders in low-resource settings, provided that appropriate adaptations are made to accommodate cultural nuances and contextual factors. Building on these findings, Patel et al. (2017) embarked on a longitudinal study to examine the long-term outcomes of a CBT intervention for anxiety in a low-resource community in Sub-Saharan Africa. Utilizing repeated measures analysis, the study demonstrated sustained reductions in anxiety symptoms at follow-up assessments, suggesting the enduring benefits of CBT in resource-constrained environments. The study recommended the integration of CBT into routine primary healthcare services as a means to enhance accessibility and sustainability, thereby addressing the mental health needs of underserved populations effectively. These studies collectively contribute to the growing evidence base supporting the effectiveness of CBT for anxiety disorders in low-resource settings, while also emphasizing the importance of culturally adapted and sustainable interventions to address mental health challenges comprehensively.

Abdulmalik (2018) conducted a cluster randomized controlled trial (RCT) aiming to evaluate the effectiveness of a group cognitive-behavioral therapy (CBT) intervention for anxiety and depression among adults in primary care settings in Nigeria. The study recruited participants from primary care clinics and utilized standardized measures to assess anxiety symptoms before and after the intervention. Results from the RCT demonstrated a significant reduction in anxiety symptoms among participants who received the group CBT intervention compared to the control group. These findings suggest that group CBT delivered within primary care settings can be an effective strategy for reducing anxiety symptoms in low-resource contexts, emphasizing the potential of integrating mental health services into routine primary care to address the burden of anxiety disorders.

Naeem (2019) conducted a quasi-experimental study to assess the effectiveness of a culturally adapted CBT intervention for anxiety disorders among refugees residing in Pakistan. The study employed pre- and post-intervention assessments to measure changes in anxiety symptoms among participants. The results indicated a significant reduction in anxiety symptoms among individuals who received the culturally adapted CBT intervention. This study underscores the importance of culturally tailored interventions in addressing anxiety disorders among refugee populations in low-resource settings, highlighting the need for contextually relevant mental health interventions that consider the unique sociocultural backgrounds and experiences of refugees.

Gallo (2018) conducted a systematic review and meta-analysis to evaluate the effectiveness of low-intensity CBT interventions for anxiety disorders in low- and middle-income countries (LMICs). Through a comprehensive synthesis of findings from various studies, the review revealed moderate to large effect sizes for low-intensity CBT interventions in reducing anxiety symptoms across LMICs. The study highlights the potential of low-intensity CBT interventions, such as guided self-help and internet-based interventions, to address the treatment gap for anxiety disorders in low-resource settings by increasing accessibility and scalability. These findings underscore the importance of leveraging innovative delivery modalities to expand access to evidence-based mental health interventions in resource-constrained contexts.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gap: Despite the effectiveness of culturally adapted CBT interventions for anxiety disorders in low-resource settings, there remains a conceptual gap in understanding the specific elements of cultural adaptation that contribute to intervention success. While studies like Aguilar-Ortiz (2018) have shown significant reductions in anxiety symptoms post-intervention, there is limited exploration of which cultural components are most impactful and how they interact with the core principles of CBT. Further research is needed to elucidate the mechanisms through which cultural adaptation enhances intervention outcomes, facilitating the development of more tailored and effective interventions for diverse cultural contexts.

Contextual Gap: While studies such as Ho (2016) and Patel (2017) have demonstrated the effectiveness of CBT for anxiety disorders in low-resource settings, there is a contextual gap in understanding the specific contextual factors that influence intervention delivery and outcomes. Factors such as socio-economic status, access to healthcare resources, and cultural beliefs about mental health may interact with the implementation of CBT interventions, shaping their effectiveness and acceptability. Future research should explore these contextual factors in greater depth to inform the development of contextually relevant and sustainable interventions that address the unique challenges of delivering mental healthcare in low-resource settings.

Geographical Gap: Although studies like Abdulmalik (2018) and Naeem (2019) have investigated the effectiveness of CBT interventions for anxiety disorders in specific low-resource settings such as Nigeria and Pakistan, there is a geographical gap in understanding how these interventions may vary across different regions and cultural contexts within low-resource settings. Factors such as geographic location, urban-rural divide, and ethnic diversity may influence the implementation and outcomes of CBT interventions. Therefore, there is a need for research that examines the geographical variability in the effectiveness of CBT interventions for anxiety disorders, with a focus on identifying region-specific barriers and facilitators to inform more targeted intervention strategies.

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, the evidence overwhelmingly supports the effectiveness of cognitive-behavioral therapy (CBT) for treating anxiety disorders in low-resource settings. Studies such as Aguilar-Ortiz (2018), Ho (2016), and Patel et al. (2017) have demonstrated significant reductions in anxiety symptoms following CBT interventions, underscoring its potential as a viable treatment option even in resource-constrained environments. Moreover, research by Abdulmalik (2018) and Naeem

(2019) has highlighted the feasibility and acceptability of delivering CBT within primary care settings and among refugee populations, further emphasizing its versatility and applicability across diverse contexts.

Despite these promising findings, challenges remain in ensuring equitable access to CBT interventions in low-resource settings. Addressing issues such as limited mental health resources, cultural barriers, and geographical disparities is crucial to expanding the reach of CBT and improving mental health outcomes for underserved populations. Additionally, further research is needed to explore the mechanisms of cultural adaptation, contextual factors influencing intervention delivery, and geographical variability in intervention effectiveness. Overall, while there is still work to be done in addressing these challenges and research gaps, the existing evidence strongly suggests that CBT holds great promise as an effective and scalable intervention for anxiety disorders in low-resource settings. By leveraging innovative delivery modalities, culturally sensitive adaptations, and collaborative approaches, CBT has the potential to significantly alleviate the burden of anxiety disorders and improve the quality of life for millions of individuals worldwide, regardless of resource availability.

Recommendations

Theory

To advance theoretical understanding, it is essential to conduct further research that examines the mechanisms of cultural adaptation within CBT interventions. This includes identifying specific cultural elements that contribute to intervention success and understanding how they interact with core CBT principles. By elucidating these mechanisms, researchers can refine existing theoretical frameworks and develop new models that integrate cultural considerations into CBT theory. This will contribute to a more nuanced understanding of how cultural adaptation enhances intervention outcomes and inform the development of more effective and culturally sensitive interventions.

Practice

In terms of practice, it is crucial to prioritize capacity building and training initiatives to empower local healthcare providers in delivering CBT interventions. This involves providing training in culturally adapted CBT techniques and ensuring ongoing supervision and support to maintain fidelity to intervention protocols. Additionally, interventions should be designed to be flexible and scalable, allowing for adaptation to diverse cultural contexts and resource constraints. By building local capacity, practitioners can deliver high-quality CBT interventions that are tailored to the needs of the community, thereby maximizing intervention effectiveness and sustainability.

Policy

At the policy level, there is a need to advocate for increased investment in mental health resources and the integration of CBT into routine primary healthcare services. This includes allocating funding for mental health training programs, expanding access to CBT services in underserved areas, and integrating mental health into existing healthcare infrastructure. Furthermore, interventions should be designed to be flexible and scalable, allowing for adaptation to diverse cultural contexts and resource constraints. Policymakers should prioritize the development and implementation of policies that support culturally sensitive and contextually relevant mental health interventions. By addressing systemic barriers to CBT access and delivery, policymakers can

facilitate the widespread adoption of evidence-based interventions and improve mental health outcomes for populations in low-resource settings.

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