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Effectiveness of Evidence-Based Interventions Towards Mental Health Illness Among Nigerian Adolescents and Adults: Systematic Review

Nelyn Akunna Okoye[1], Peter Kenechukwu AGBO[2], Ernest Chinedu OKOLI[3], Saidu Malgwi Hassan[3], and Rosemary Nneka Udeji[4]

[1]Rivers State University Hospital Services Department
[2]Bayhealth Hospital Dover, Delaware
[3]UNICEF Nigeria, Maiduguri, Nigeria
[4]Ikate Primary Health Centre Lagos

[*]**Corresponding author:** Okoye NA, Rivers State University Hospital Services Department

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Abstract

Mental health illness (MHI) remains a major public health issues around the world, while the advance country are making progress in their intervention strategy in recent decades, there have limited advancement in dealing with (MHI) and evidence-based interventions in the low-and middle-income countries (LMICs) including Nigeria. Therefore, the aim of this systematic review is establish the effectiveness of available evidenced-based interventions towards MHI among Nigerian adolescents and adults in recent decade (2014 – 2024). The review was conducted with search strategy of keywords on major electronic data Medline, Pubmed, Scopus and Cinahl Plus on 10 April, 2024. At the end of the search strategy and database creation, the sourced articles were further subjected to inclusion/exclusion criteria for final of articles that fit the purpose of the systematic review. Of 3,107 articles returned from the search strategy and subjected to different criteria, 12 articles finally made the eligibility and suitability process for inclusion in the review. The included studies were carried out in Lagos (N = 1, 8.33%), Oyo (N = 5, 41.6%), Enugu (N = 1, 8.33%), Anambra (N = 1, 8.33%), Sokoto (N = 1, 8.33%) and not clearly stated (NCS) location. The MHI included in the studies; depression only (N = 6, 50.0%), depression and intellectual disabilities (N = 1, 8.33%), post-traumatic stress disorder-PTSD (N = 2, 16.67%) and perinatal depression (PD) (N = 3, 25.0%). The studies design included Cluster randomized controlled trial (CRCT), Randomized trial control (RTC), Group randomized trial, Pretest-post-test randomized control and Quasi experiment. All studies reported effectiveness in the interventions towards MHI treatments. The review established the effectiveness of different evidence-based interventions in different settings in Nigeria and they can be integrated into primary healthcare system for MHI treatment.

Keywords

Mental Health, Mental Health Illness, Depression, PTSD, Nigeria

Introduction

Mental health illness (MHI) amount for the 16% of the world burden of disease and morbidity among young [1]. The common MHI includes depression and anxiety which remains the main cause of injuries and disability in adolescents and beyond [1]. According to World Health Organization [WHO] (2021), about 10% of the global adolescents have MHI and most cases are not treated or diagnosed which are carried to their later life leading to all forms of physical and metal risks [2]. It is therefore important to seek early intervention, as many cases of experienced MHI at adulthood initiated during the adolescence stage [3] which are sometimes occurred due to various societal challenges [4].

In many Low-Middle Income Countries (LMICs), the issue of MHI is increasing especially with the young individuals/youths as a result various societal deprivation such as limited resources, poor academic performances, violence among others [5,6]. Despite this situation, many LMICs are inadequately equipped for MHI interventions while high-income countries (HICs) are lacking in the area of trained mental health

professionals [2]. Mental health is a critical aspect of health and wellbeing; however, less attention has been given to it in many parts of the world including Nigeria [7].

A survey carried out in Nigeria regarding mental health in 2019 by the Africa Polling Institute (API) and EpiAFRIC indicated that the extent of awareness of MHI in Nigeria is low and most the individual involved in the study noted to have MHI which is as a result of drug abuse, possession by evil spirits and sickness of the brain and they are mostly taken to religion places for spiritual interventions [7].

Recently, the development and evaluation of intervention towards MHI treatment and prevention have made some positive progress among the HICs with some evidence-based interventions that have been able to tackle the issue of MHI[8,9]. However, there are limited evidence-based interventions in many LMICs while those available are "still tentative" [9]. Many of the available evidence-based interventions and prevention strategies for MHI are adopted from the HICs; however, uncertainty still exist on the effectiveness of such interventions on LMICs [9]. With focus on Nigeria among LMICs, the aim of this systematic review was to establish the effectiveness of evidence-based interventions available in Nigeria for the treatment of MHI among Nigerians.

Methods

Search strategy

This systematic review was carried out based on the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) procedure [10]. The search strategy entails the use of keywords and related phrase as means to source for relevant articles and other related materials. Database engine such as Medline, Pubmed, Scopus and Cinahl Plus were used with several of the keywords to develop the database for articles. Also, the search made use of the Boolean operators (AND/OR) to connect the words for direct and limited search inquiry [11]. To further increase the number of related articles, the references of the sourced articles were studied for more similar articles within the scope of the keywords [12]. At the end of the search strategy and database creation, the sourced articles were further subjected to inclusion/exclusion criteria for final of articles that fit the purpose of the systematic review [13]. Three databases (PubMed, Medline, Cinahl and Scopus) were explored using the following research string: "Mental Health Disorder in Nigeria OR Mental Health Illness in Nigeria" AND "Prevalence of Mental Health Disorder in Nigeria OR Prevalence of Mental Health Illness in Nigeria" AND "Evidence-based intervention of Mental Health Disorder in Nigeria OR Evidence-based intervention of Mental Health Illness in Nigeria". The feedbacks were subjected to eligibility criteria based on inclusion and exclusion criteria.

Inclusion criteria

The inclusion criteria ensure that:

1. Period: All articles published within the last 10years (2014 – 2024) are included in the study.
2. Geographical Location: All studies/article that was conducted in any states in Nigeria or Nigeria combined with another country.
3. Research/Study Design: Articles are limited to experimental studies/research, clinical trials, quasi and mixed studies of any of the research types are included in the study.
4. All articles written in English Language or available in English version are included.

5. All articles that are related to the keywords are included.

Exclusion criteria

The exclusion criteria ensure that:

1. Articles based on systematic review or other form of review, letters, short communications or book and book chapter (that is not experimental based) are excluded from the study.
2. All studies carried out outside Nigeria are excluded from the study.
3. All articles before year 2014 are excluded from the study.
4. All articles written in language other than English language or not available in English language version are excluded.
5. All articles that are not related to the keywords are excluded.

Critiquing tool

The selected articles were subjected to critiquing process to ascertain the strength and limitation of the articles as well as its quality to achieve the objective of the study. The critiquing process of the articles were carried out through Critical Appraisal Skills Programme (CASP) tool [14]. According to Dalton and co-researchers [15], CASP is commonly used for evaluation of qualitative research related to health and social care study while another group asserted the adoption is due to easy-to-use especially for individual with limited qualitative research experience [16].

Results

The search was conducted on 10 April 2024 and total of 3,107 articles were identified across two of the electronic databases (Cinahl Plus and Medline returned no article from the research strings). For PubMed platform, the string search returned with total of 2,836 articles which was further subjected the eligibility criteria and a total of 22 articles met the inclusion criteria and were selected for further review. For the Scopus platform, the total returned articles from the string search was 271 and after subjected to the eligibility procedure, 6 articles met the inclusion criteria and were selected for further review. Therefore, a total of 28 articles were selected from the electronic database based on the on the inclusion and exclusion criteria. The references of the articles were studies while the articles were review for duplicates, misleading tittle and their suitability for study objective and a total of 12 articles were used for the systematic review. The selection and review process in consistent with the PRISMA-P is presented in Figure 1 while Table 1 presented the synthesis of the studies included in the systematic review. The included studies were carried out in Lagos (N = 1, 8.33%), Oyo (N = 5, 41.6%), Enugu (N = 1, 8.33%), Anambra (N = 1, 8.33%), Sokoto (N = 1, 8.33%) and not clearly stated (NCS) location. The MHI included in the studies; depression only (N = 6, 50.0%), depression and intellectual disabilities (N = 1, 8.33%), post-traumatic stress disorder-PTSD (N = 2, 16.67%) and perinatal depression (PD) (N = 3, 25.0%). The study design included in the studies; Cluster randomized controlled trial (CRCT) (N = 6, 50.0%), Randomized trial control (RTC) (N = 1, 8.33%), Group randomized trial (N = 1, 8.33%), Pretest-post-test randomized control (N = 2, 16.67%), Quasi experiment (N = 1, 8.33%) and NCS (N = 1, 8.33%).

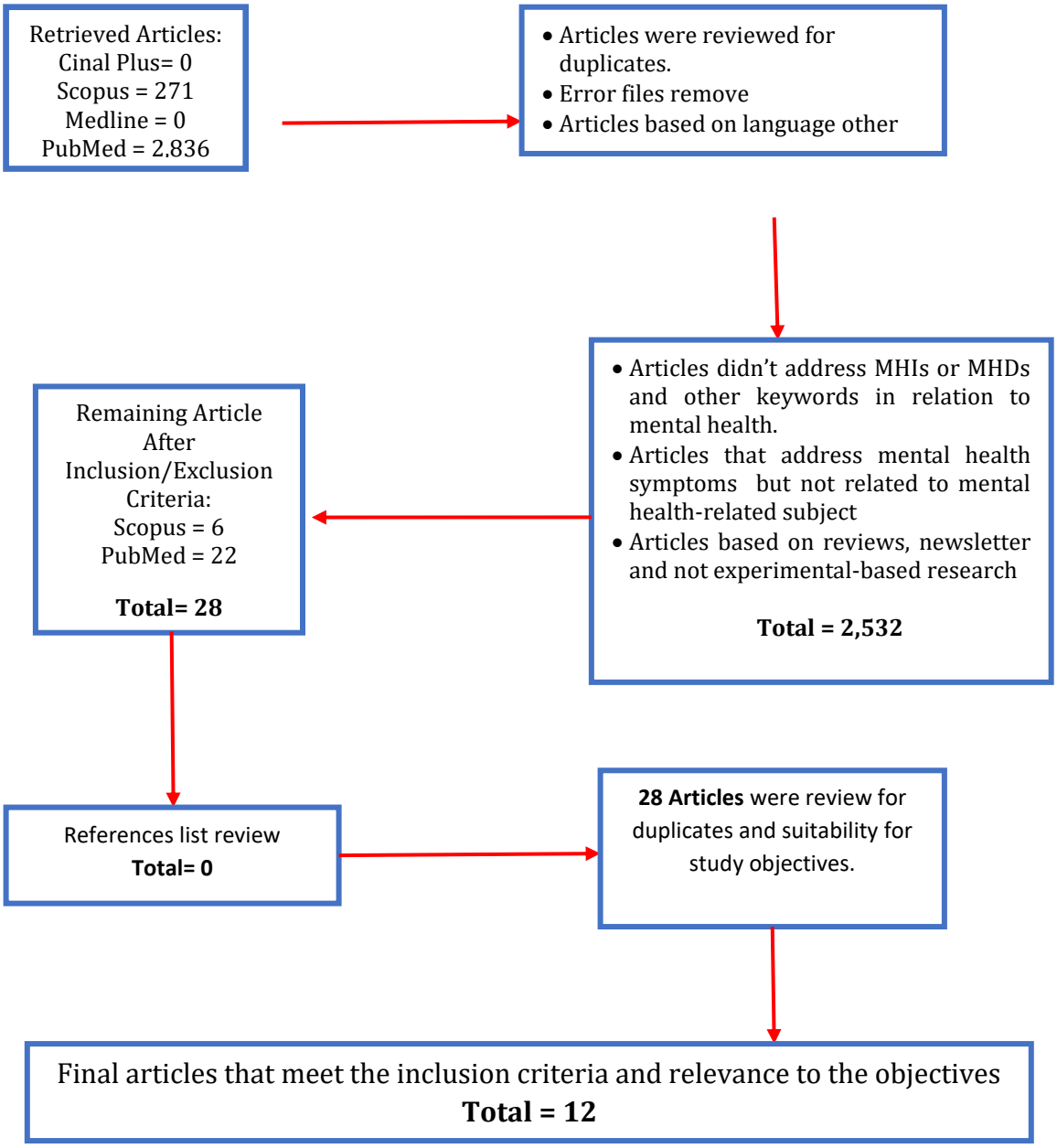

Table 1: Synthesis of the studies included in the systematic review (*n* = 12).

Author (s)	State	MHI	Study Design	Targeted Group	Types of Intervention	Configuration	Submission on Intervention

Abiodun et al (2019)	Lagos	Depression	CRTC	Adult (18-60yrs)	STEPCARE	Group (2: Experient & Control Groups)	Significant improvement at 12months
Gureje et al. (2022)	Oyo	Perinatal Depression	CRTC	< 20 yrs	Problem-solving + Behavioural activation + Parenting skill training + Parenting support	Individidual	Effective in reliving depression
Musa et al. (2021)	Sokoto	Depression + Intellectual Disabilities	RTC	Adult (18-60yrs)	Mindfulness-based Cognitive therapy	Individidual	Improved experience
Iyendo et al. (2024)	Zamfara and Katsina	PTSD	Quasi Experiment	Secondary School Pupil	Interactive audio-visual-based art + music therapy	Group (2: Experient & Control Groups)	Effective Intervention Strategy
Ezeudu et al. (2019)	Enugu	Depression	NCS	Undergraduate	Rational-emotive Behaviour psyco-educattional	Group (2: Experient & Control Groups)	Effective Intervention for depression
Gureje et al. (2019)	Oyo	Perinatal Depression	CRTC	16 – 45yrs	High-intensity Treatment (HIT) + Low-intensity Treatment (LIT)	Individidual	HIT effective for severe depression
Onyechi et al. (2016)	Anambra	Depression	Pretest–Post-Test Randomized Control Group	NCS	Cognitive Behavioral Therapy	Group (2: Experient & Control Groups)	Significantly reduced the depressive symptoms
Ofoegbu et al. (2019)	NCS	Depression	GRT	Undergraduate	Guided Internet-Assisted	Group (2: Experient &	GIAI was significantly effective in

					Intervention (GIAI)	Control Groups)	reducing depression
Edeh et al. (2021)	NCS	PTSD	Pretest–Post-Test Randomized Control Group	NCS	Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)	Group (2: Experient & Control Groups)	TF-CBT significantly improve participant mental health
Gureje et al. (2019)	Oyo	Depression	CRTC	18yrs +	Stepped-Care Intervention Package (STEPCARE)	Group (2: Experient & Control Groups)	STEPCARE effective for moderate and less severe depression
Gureje et al. (2015)	Oyo	Perinatal Depression	CRTC	16 – 45yrs	Expanding Care For Perinatal Women With Depression (EXPONATE)	Group (2: Experient & Control Groups)	EXPONATE improve recovery from depression
Gureje et al. (2015)	Oyo	Depression	CRTC	NCS	Stepped-Care Intervention Package (STEPCARE)	Group (2: Experient & Control Groups)	STEPCARE effective for recovery from depression

Discussion

The present systematic review tracked evidence-based intervents for the treatment of MHI among adolescents and adults (review captured age 16-60years) individuals in Nigeria. Limited number of studies were captured within the last decade (n = 12) covering adolescents and adult MHI (n = 4), using different study design (n = 5) and approaches (n = 10) to treat these illness. The outcome revealed the need for more growing evidence-based studies on mental health issues in country like Nigeria; although, a study opined that there a growing body of evidence on the treatment of child and adolescent mental health problems in LMICs [9]. The submission on various interventions revealed effective and improved outcome on the treatment of various MHIs among the adolescent and adults. The present study finding similarity in other reviews conducted [6,9].

The PD are generally reported among pregnant adolescent (<20years) and Women aged between 16 and 45 years reported an effective intervention and improve revocery among the treated groups [17, 18]. The intervention cutacross psychoeducation, problem solving treatment, and parenting skills which was similar to those reported by Grande et al. [6] for LMICs review. PD occurrence is common among

adolescent mothers than older mothers of childbearing age [19]. It has been reported that 31% of women have their first live birth before the age of 18 years in Nigeria [18] and many suffer PD without proper treatment [20].

The interventions reported for depression among adults (18 – 60years) [21], undergraduates [22, 23], and NCS categories [17, 24] was significant improve wellness experience and reduced depression symptoms. The intervention include a cognitive behavioral therapy STEPCARE package (includes screening, psychoeducation, problem-solving therapy (as the main psychological treatment), which is to be complemented with antidepressants and referral to mental health specialist when necessary [25]. Studies have indicated that low intensity psychological interventions like problem solving therapy (PST), are effective in LMICs, even when delivered by lay health workers [26].

The intervention reported for PTSD among secondary school pupils and educators was effective in improving the mental health of the victims [27, 28]. The interventions include trauma-focused cognitive behavioral therapy (TF-CBT) and interactive audio-visual-based art + music therapy. CBT is an effective therapy for addressing PTS symptoms and PTSD in individuals expose to traumatic event [29]. The trautic events of the reviewed studies were COVID-19 and survival of abduction in the Northern Nigeria. As noted by two different teams, exposure to a single traumatic event is not sufficient to cause the emergence of PTSD symptoms among people [31, 32].

Conclusion

Mental health illness and evidence-based interventions are significant aspects of wellbeing of Nigerians across all ages, and the systematic review have further establish the need for more evidence-based interventions, sufficient human and materials resource towards the provision of adequate care for individuals with mental health conditions. Mental health illness is significant public health issues, there should be integration of some of the effective interventions to the primary healthcare system of the country.

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