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Mental Health Interventions for Adolescents and Youth in Nigeria: A Systematic Review of Effectiveness

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ABSTRACT

Young people are particularly vulnerable to the protective or harmful effects of mental health that occur during the stages of development, impacting cognitive, emotional and behavioural pathways that persist through the transition to adulthood. The study aimed to synthesise available evidence on the effectiveness of interventions intended to improve mental health-related outcomes among adolescents and youth in Nigeria. The study adopted the PIO framework to guide the study, developing precise variables for the study, as well as determining inclusion and exclusion criteria for the study, and the search strategy, keywords and terms. To ensure comprehensive coverage of the literature, PubMed/MEDLINE, Embase, Scopus, AJOL, and Cochrane Library were searched. The PRISMA guideline assisted the selection of 40 studies included in the study, as the search generated 1,701 publications. The evidence indicates that the interventions have potential to improve mental health outcomes for adolescents and young adults in Nigeria, especially for structured, multi-session, and multicomponent, trauma-focused, and CBT/REBT-based interventions. As noted, there are benefits of the intervention in the reduction of levels of depression, anxiety, PTSD, academic and social anxiety, stress, self-harm or suicidal ideation, as well as across overall well-being outcomes, with some of these benefits persisting at short- to medium-term follow-up. Furthermore, school-based literacy programs were effective primarily for knowledge outcomes and some stigma/help-seeking outcomes, with limited evidence for symptom outcomes. Combined approaches tend to produce improved, significant mental health outcomes across various populations, especially CBT combined with art or music. This keys into the Nigerian context of appreciation for local and culturally focused arts and music.

INTRODUCTION

In recent years, mental health has been acknowledged as an essential aspect of health and wellbeing, especially in adolescence and young adulthood when there are significant biological, psychological, and social changes occurring (Schlack *et al.*, 2021). According to Mastorci *et al.* (2024), events in these phases are likely to mould cognitive, emotional, and behavioural pathways that persist through the transition to adulthood, rendering youth particularly vulnerable to protective or harmful effects. Young people are particularly vulnerable to the protective or harmful effects of mental health that occur during the stages of development, impacting cognitive, emotional and behavioural pathways that persist through the transition to adulthood. Therefore, it is crucial to recognise that mental health issues that occur during this time can affect one's education, social interactions, career, and ability to live healthy lives (Mastorci *et al.*, 2024). Most recently, the WHO (2025) data show that roughly one in seven children and adolescents aged 10-19 have a diagnosable mental health problem, with anxiety, depression, and behaviours accounting for a significant share of the burden of the disease. Further, mental disorders begin as early as age 14. These are typically followed by non-specific psychosocial disturbances, which can develop into any of the main mental disorders, and the age group 0–25 years represent 45% of the global burden of the condition, highlighting the importance of early identification, prevention and intervention (Colizzi *et al.*, 2020).

Untreated mental illness and illness itself have significant consequences for individuals, including lower educational achievement and productivity, heightened risks of engaging in risky behaviours, substance use, self-harm, suicide and a substantial social and economic burden to families and health systems (Organization for Economic Co-operation and Development (OECD), 2026b; WHO, 2025; Li *et al.*, 2023). As a result, youth mental health has become a prominent public health issue worldwide, requiring evidence-based, comprehensive, youth-friendly and accessible mental health systems, focused on prevention, early intervention and ongoing psychosocial support (McGorry *et al.*, 2022). However, there are important inequalities between high-income and low- and middle-income countries, with limited specialist services and constrained health systems further impacting equitable access to mental health care for young people from low-income groups (Wainberg *et al.*, 2017).

The burden of mental health disorders among young people is a public health issue and is disproportionately high in low- and middle-income countries (LMICs) where mental health systems are insufficient to properly address mental health needs (Wahdi *et al.*, 2025). In such contexts, common mental disorders are more likely to occur and

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to have a serious impact on mental functioning due to the interaction of the various factors that contribute to increasing psychological vulnerability during adolescence and early adulthood, including poverty, political instability, conflict, forced displacement, unemployment, gender disadvantage, poor educational opportunities, and exposure to violence (Alah & Abdeen, 2026; Lund *et al.*, 2010). In sub-Saharan Africa, these contextual stressors are also compounded by chronic underfunding of mental health infrastructure, a critical lack of trained mental health professionals, underdeveloped integration of mental health into primary healthcare and low availability of youth-friendly mental health services (Hart & Norris, 2025). Thus, significant disparities remain in the treatment of mental health conditions within the region, and there is evidence that most young people with mental health conditions receive little or no formal psychological or psychiatric treatment (Atewologun *et al.*, 2025).

Nigeria is an important context for youth mental health because it is the most populous country in Africa, with a population of 242.3 million (Worldometer, 2026) and is largely comprised of a young population suffering from a myriad of intersecting psychosocial stressors (Wada *et al.*, 2021a). Babasola *et al.* (2024) reported that the prevalence of mental illness among youths is severe among patients between the ages of 18 and 40. The prevalence of mental illness in Nigeria within the 10-year period of 2004-2013 was 9.9% (Ogbonna *et al.*, 2020). Adolescents and youth in Nigeria face mental health issues across a complex landscape of prevailing poverty, unemployment, high educational stress, violence and insecurity in parts of the country, displacement, gender-based violence, drug and alcohol use, and fast digital and social evolution (David *et al.*, 2023; Virk *et al.*, 2023). Young people's anxiety, depression, psychological distress, substance use disorders, and suicidal behaviours are linked to developmental vulnerabilities which are related to poverty and unemployment (OECD, 2026a). As significant as these challenges are, mental health remains one of the areas in the Nigerian health system that is the most neglected (Fadele *et al.*, 2024).

Nigeria's investment in mental health services is still insufficient, with the availability of mental health specialists in the country and the provision of community-based mental health programmes limited for people in rural areas compared to urban areas (Fadele *et al.*, 2024). The implementation of these programmes to provide equitable service delivery continues to be a challenge despite the promulgation of the National Mental Health Act and the adoption of a revised national mental health policy in Nigeria aimed at enhancing mental health governance, safeguarding the rights of people with mental health disorders and offering more access to mental health care in the community (Ozota *et al.*, 2024). However, implementation remains limited due to low investment, inadequate workforce capacity, inadequate mental health monitoring to detect depression and high out-of-pocket expenses, especially for young people who have to rely on family resources to access care (Damul *et al.*, 2026).

In Nigeria, the mental health situation among youth is influenced by a complex interaction of inter-individual, intra-personal, community, institutional and policy-level factors that either hinder or promote their mental health and access to care (Fadele *et al.*, 2024). Insufficient mental health literacy, not knowing how to respond to mental health symptoms, fear of social judgment, concerns about confidentiality and self-stigma often delay help-seeking among individuals and can lead to a longer period of psychological distress (Ahad *et al.*, 2023). Furthermore, family stigma and communities' misbeliefs often mean that people suffering from mental health problems are seen as having a spiritual or moral imbalance or failing to follow the rules of others, supporting informal care providers such as traditional and faith healers before professional mental health services, which makes it likely that those affected tend to seek help from laypeople before seeking professional help (Shipurut *et al.*, 2024). These support systems tend to remain relevant for many communities and are easy to access; however, later contact with professional care services leads to worse outcomes for those who need specialised care (Op de Beeck *et al.*, 2025). These are compounded by institutional barriers, including a shortage of trained mental health workers, limited services for adolescents and young adults, uncoordinated referral systems, a lack of school-based mental health programmes, and a focus on specialist facilities in urban areas, making mental health services inaccessible to many youth and adolescents (Moore *et al.*, 2022).

Limited finances and access to mental health care insurance, high out-of-pocket healthcare costs, and transportation expenses also create extra barriers for young people, who tend to be economically reliant on their families (Sofi & Yasmin, 2024). Contrastingly, Onwudiwe *et al.* (2025) assert that protective factors like supportive family relationships, positive peer groups, psychosocial interventions in schools, community awareness programmes, cutting-edge digital mental health approaches, primary health care incorporating mental health services, and empowering policy frameworks can enhance mental health literacy, eliminate stigma, promote early seeking of help, and bolster continuity of care (Mbedzi *et al.*, 2025). Notably, mental health barriers and facilitators operate across several social and structural levels, leading to significant differences in the mental health experiences of Nigerian youths by gender, well-being, economic status, educational attainment, geographic location, disability, and exposure to conflict or other adverse life events (Aisiku & Imarenezor, 2025).

Rationale

Adolescents and young adults in Nigeria are the most burdened population when it comes to depression, anxiety, trauma, and psychological distress, and also have the highest burden of the mental health treatment gap, as the country is the poorest and most vulnerable of

the adolescent population cohorts (Wada *et al.*, 2021b). This dire public health situation led to the emergence of a wide range of non-pharmacological, psychological, and community-based intervention strategies that have been developed to provide accessible and low-intensity mental healthcare (Aluh *et al.*, 2023; Ogunwale, 2023). Structured cognitive and behavioural psychotherapies in formal educational institutions are the most common forms of mental health interventions in Nigeria. The two most researched methods are Cognitive Behavioural Therapy (CBT) and Rational Emotive Behaviour Therapy (REBT), which are mostly taught in secondary schools and universities (WHO, 2020). These protocols are psychological approaches that emphasise cognitive restructuring, emotion regulation, and behavioural modification to address depressive symptoms, academic burnout, exam anxiety, test-taking distress, conduct issues and traumatic symptoms in students (Fadele *et al.*, 2024).

A wide range of psychotherapies, curriculum-based psychoeducational programmes and mental health literacy campaigns have been implemented to address the undercurrent of superstitious causal attributions, pervasive social stigma, and positive help-seeking attitudes of youth, parents, and educators (Shipurut *et al.*, 2024; Ahad *et al.*, 2023). Expressive arts and creative therapies have appraised for the potential to create culturally relevant and non-stigmatizing avenues into mental health care (Colizzi *et al.*, 2020). Music, drama-in-education, expressive visual arts, and mindfulness-based stress reduction have proven to be highly effective interventions to reduce emotional distress, foster psychological resilience and develop adaptive social connectedness in vulnerable youth (Li *et al.*, 2025a). Also, in line with the guidelines of WHO (2020) on task-sharing, many initiatives in Nigeria have been implemented to train non-specialist front-line actors such as secondary school guidance counsellors, classroom teachers, primary care nurses, community health extension workers, and peer mentors to carry out psychological screening, psychological first aid, and simple counselling. At the same time, emerging digital tele-mental health tools, such as automated SMS messaging systems and web-based psychoeducation and mobile applications, are being tested to overcome geographical and confidentiality barriers and bypass transportation constraints (Fadele *et al.*, 2024). Hence, the synthesis of the effectiveness of mental health interventions for adolescents and young adults most definitely bridges the gap between policy and practice by providing evidence-based approaches for mental health interventions and providing guidance on how mental health interventions can be operationalised in the Nigerian health and education sector at scale and in an equitable manner, as guided by the Nigerian National Mental Health Act 2021 (Aluh *et al.*, 2023).

Research Question

How effective are the available interventions in enhancing the mental health outcomes of adolescents and youths in Nigeria?

Aim

To synthesise the available evidence on the effectiveness of interventions intended to enhance mental health-related outcomes among adolescents and youths in Nigeria.

MATERIALS AND METHODS

Study Design

This study uses a systematic review design to identify, critically appraise, and synthesise empirical evidence on the effectiveness of interventions that improve the outcomes of mental health conditions among young people in Nigeria. It uses transparent, rigorous, and reproducible methods to identify, evaluate, and synthesise the findings of previous studies that capture the complexity of youth mental health intervention approaches (Khosravi, 2026). Providing a valid summary of existing literature and addressing a clear and specific question on the effectiveness of mental health interventions among adolescents and young adults (Moosapour *et al.*, 2021).

Registration of Review on PROSPERO

The review protocol is registered on PROSPERO and assigned the reference number CRD420261532333.

The PIO Framework for Identification of the Key Variables for the Review

The Population, Intervention, and Outcome (PIO) framework is adopted because the framework offers methodological flexibility in accommodating the diverse empirical designs and heterogeneous evidence base characteristic of mental health research in low- and middle-income countries (Methley *et al.*, 2014). By eliminating the rigid comparator constraints, the framework maximises search sensitivity, establishes inclusive eligibility criteria, and enables a robust capture of a comprehensive spectrum of empirical evidence and a narrative synthesis across Nigeria's evolving mental health landscape (Ogunwale, 2023).

Eligibility Criteria for Publication Retrieval from Database

The eligibility criteria for this systematic review were developed using the PIO framework to ensure a transparent and systematic approach to study selection. Studies were assessed for inclusion based on predefined criteria relating to the study population, type of intervention, context, study design, publication characteristics, and reported outcomes (Eriksen & Frandsen, 2018).

Search Strategy

A comprehensive literature search was undertaken to identify studies examining the barriers and facilitators influencing the mental health of young people in Nigeria. The search strategy was developed using the Population, Intervention, and Outcome (PIO) framework (Eriksen & Frandsen, 2018). The controlled vocabulary (e.g., Medical Subject Headings [MeSH]) was used with free-text terms

Table 1: The PIO components guiding the study

PIO component	Variable Insight
Population	Nigerian adolescents and youths aged 10 to 35 years across educational, healthcare, community, and humanitarian settings (Colizzi *et al.*, 2020; WHO, 2025)
intervention	Structured psychological, cognitive-behavioural, psychoeducational, expressive arts (music, video), digital, or task-shared mental health intervention
Outcome	Multidimensional improved psychosocial endpoints, including reduction in clinical symptoms of depression, anxiety, distress, post-traumatic stress, enhanced literacy, stigma reduction, and improved help-seeking

to maximise retrieval of relevant studies, leaning into the use of synonyms, alternative spellings, truncation symbols, phrase searching, and Boolean operators (AND, OR, and NOT) to enhance search sensitivity and specificity (DeMars & Perruso, 2022). Where appropriate, search strategies were adapted to meet the indexing requirements and search functionalities of each electronic database.

Search Concepts and Keywords

The search syntax and keywords were developed in an iterative, multistage process following the guidelines of the Cochrane Handbook for developing search strategies (Lefebvre *et al.*, 2023), and the standard in Peer Review of Electronic Search Strategies (PRESS) (McGowan *et al.*, 2016). Review keywords were developed in relation to the framework components of this review: Population (adolescent, youth, young adult, student), Exposure/Intervention (psychological therapies, cognitive behavioural therapy, psychoeducation, expressive arts, digital health, task sharing), Outcomes (depression, anxiety, distress, suicide, literacy, stigma, well-being), and Context (Nigeria, Nigerian, clinic, school, hospital). Key sentinel studies on global youth mental health (Bramer *et al.*, 2018; WHO, 2020) were used to identify the first search terms and controlled vocabulary to include Medical Subject Headings (MeSH) in PubMed and Embase. The wide range of free-text synonyms, British/American spelling differences, phrase searching, and truncation symbols (e.g., adolescen*, teen*, youth*, and disorder*) were combined to ensure maximum retrieval sensitivity in order to identify as many synonyms as possible (Rethlefsen *et al.*, 2021). The master search string was created, tested, and refined in PubMed/MEDLINE to select a group of benchmark trials for known input, and then translated and adapted to the indexing structures and syntax of the other library databases (Embase, Scopus, AJOL, and the Cochrane Library) (Lefebvre *et al.*, 2023).

Master Boolean Search Strategy

("young people" OR youth OR adolescent* OR teen* OR "young adult*" OR student*) AND ("mental health" OR "mental wellbeing" OR depression OR anxiety OR stress OR distress OR psychosocial OR "mental disorder*" OR suicide) AND (barrier* OR facilitator* OR determinant* OR challenge* OR obstacle* OR enabler* OR stigma OR "mental health literacy" OR "help-seeking" OR accessibility OR utilisation OR utilization OR uptake) AND (Nigeria OR Nigerian*) AND ("Intervention")

Databases that were Searched

To ensure comprehensive coverage of the literature, the following electronic databases were searched: PubMed/MEDLINE, Embase, Scopus, AJOL, and Cochrane Library. AJOL has the world's largest online collection of African-published scholarly journals, with more than 650 journals across the continent, particularly Nigerian medical, psychiatric, educational, and psychological journals (Murray *et al.*, 2018). Scopus covers over 25,000 peer-reviewed journals in health sciences, behavioural sciences, social sciences, education and development studies (Mongeon & Paul-Hus, 2016). Embase indexes more than 2,900 journals not included in MEDLINE, and it has excellent coverage of world literature, especially from Europe, Asia, and the developing world (Bramer *et al.*, 2017). By ensuring comprehensive retrieval of high-impact psychiatric and clinical mental health trials published in peer-reviewed international medical journals in Nigeria, MEDLINE provides the most comprehensive literature retrieval. MEDLINE ensures comprehensive retrieval of high-impact trials in psychiatric and clinical mental health conducted in Nigeria and published in leading international medical journals (Bramer *et al.*, 2017). Cochrane CENTRAL guarantees that all controlled intervention trials are retrieved, and it is a gold-standard source for methodological appraisal, which ensures that no registered trial protocols or trial reports in grey literature are excluded (Higgins *et al.*, 2023).

Study Selection Using the PRISMA Framework

The review adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to ensure methodologically transparent and complete study selection (Page *et al.*, 2020). To mitigate bias and improve the study's repeatability, methodological decisions such as keywords, titles, objectives and abstract content guided study selection (De Cassai *et al.*, 2025). This ensures the synthesis produces a reliable, comprehensive evidence base to inform Nigerian policy, practice, and future research on youth mental health (Martinez *et al.*, 2025).

Quality Appraisal

All included studies were evaluated for methodological quality using the JBI quality appraisal checklist, which

Table 2: The exclusion and inclusion criteria utilized to assess and screen studies that have been sourced

Criterion	Inclusion Criteria	Exclusion Criteria
Population	Studies involving young people residing in Nigeria are consistent with the World Health Organisation's definition of adolescents and young people (10-34 years). Studies including broader age groups are eligible if data for young people can be extracted separately.	Studies involving only children (<10 years) or adults (>34 years) without disaggregated data for adolescents and young adults, and not resident in Nigeria
Intervention types	Studies that are focused exclusively on clinical treatment outcomes, pharmacological interventions	Studies that are not focused exclusively on clinical treatment outcomes, pharmacological interventions, or neurological disorders
Studies	Studies conducted within Nigeria, irrespective of geopolitical zone, setting (urban, rural, school, university, healthcare facility, or community), or socioeconomic context.	Studies conducted outside Nigeria or multinational studies
Study Design	Primary empirical studies employing cross-sectional, cohort, case-control, or randomised controlled trial	Editorials, opinion papers, commentaries, conference abstracts without full text, letters to editors, protocols, dissertations, book chapters, narrative reviews, systematic reviews, scoping reviews, and meta-analyses.
Publication Period	Studies published between January 2016 and 2026, to allow for the assessment of recent publications and ensure coherence of heterogeneous sources (Leite *et al.*, 2019).	Studies published before January 2016.
Language	Articles published in English.	Articles published in languages other than English, depending on whether the translation is unavailable.
Outcomes	Studies that report outcomes relevant to the effectiveness of mental health interventions and improvement.	Studies that do not report outcomes relevant to the effects of interventions on mental health or mental health service utilisation among young people.
Publication Status	Peer-reviewed journal articles.	Unpublished manuscripts, preprints, grey literature, and duplicate publications. Duplicate reports from the same study were assessed, with the most comprehensive version retained.

allowed for the comparison of the study methodology and the data that were gathered using credible tools based on the intervention under study, and how the data were analysed to answer the research question (Tang *et al.*, 2026). Serving as the checklists for assessing the included study trustworthiness, transparency, and depth of analysis in randomised controlled trials and quasi-experimental studies (Jia & Stern, 2026). 77.5% of the included studies were randomised controlled trials that adhered to the true principles of randomisation, the CONSORT framework, and used appropriate statistical analysis to measure association between the intervention and mental outcomes among treatment groups post-intervention.

Data Extraction

A standardised data extraction form, specially developed for this review, was used to extract data. The form includes the following information: author(s), objective, study location, study design, study population, intervention, study outcomes, and conclusion. Büchter *et al.* (2020) state that a standardised extraction process facilitates consistency, reduces error, and ensures that all information is captured consistently for subsequent quality appraisal and thematic synthesis narration. Additionally, it is recommended that the reported data extraction procedure be better described to improve study transparency. Defining minimum data-extraction requirements ensures comparability across studies and increases transparency. This enabled the researchers to use previously conducted studies for future updates, minimising research waste (Taylor *et al.*, 2022).

Data Synthesis

The review adopts a SWiM (Synthesis Without Meta-analysis) approach to synthesise and integrate findings from different studies (Campbell *et al.*, 2020). If there is significant methodological or clinical diversity, then the SWiM approach permits narrative summarisation to provide a complete and contextualised assessment of the study findings (Gagnier *et al.*, 2012).

Table 3: keywords and search terms

Search Concept	Keywords and Search Terms
Population	"Young people" OR youth OR adolescent* OR adolescen* OR teen* OR teenager* OR "young adult*" OR student* OR "school-aged" OR "secondary school student*" OR undergraduate*
Mental Health	"Mental health" OR "mental well-being" OR "mental well-being" OR "well-being" OR "psychological well-being" OR "psychological well-being" OR depression OR depressive OR anxiety OR stress OR distress OR "psychological distress" OR suicide OR suicidal OR "suicidal ideation" OR "mental disorder*" OR "psychiatric disorder*" OR psychosocial
Intervention	barrier* OR facilitator* OR determinant* OR challenge* OR obstacle* OR enabler* OR perception* OR attitude* OR stigma OR discrimination OR "mental health literacy" OR "help-seeking" OR "health-seeking behaviour" OR accessibility OR access OR utilisation OR uptake OR acceptability OR availability OR Intervention
Context	Nigeria OR Nigerian*

RESULTS AND DISCUSSION

Findings

Characteristics of the retrieved studies

Forty studies were retrieved for the review: 32 were randomised controlled trials, 1 study was cross-sectional, and 7 were quasi-experimental, as classified in the data extraction table. Evidence was mostly found in secondary schools and universities; 4 studies involved adolescent mothers during the perinatal period, clinically depressed adolescents, and/or youth with a history of self-harm or suicidal ideation. Interventions and outcomes were very diverse, and outcomes were not pooled statistically.

Data Extraction

Interventions Focused on depression

A brief school-based group cognitive behavioural therapy (CBT) programme for depressed adolescents reduced scores on both the Beck Depression Inventory and Short Mood and Feelings Questionnaire compared with the control condition at one week, with effects described as large and maintained at 16 weeks (Bella-Awusah *et al.*, 2016). In clinically depressed adolescents who received medication, a group intervention program that involved administering the CBT skills of basic skills + psychoeducation yielded reductions in depressive symptoms, as well as increases in treatment adherence knowledge, hope and attitudes, which were maintained four weeks after treatment (Isa *et al.*, 2018). Structured psychological interventions gave largely favourable effects on depression symptoms.

Ezegbe *et al.* (2019) revealed that CBT intervention decreased anxiety and depression among social science education undergraduates, and its effect lasted for three months. For the university students and educators impacted by the COVID-19 pandemic, trauma-focused CBT was also linked to a decrease in levels of depression and post-traumatic stress symptoms and an increase in overall mental health. However, outcomes for the student subgroup were not reported separately (Edeh *et al.*, 2022). Rational-emotive approaches lowered depression among students in chemistry education (Ezeudu *et al.*, 2019), religious education (Eseadi *et al.*, 2022), and medical education (Victor-Aigbodion *et al.*, 2023). Interestingly, Eseadi *et al.* (2022) reported a large partial eta squared at post-test ($\eta p2 = .90$) and two-week follow-up ($\eta p2 = .92$) for religious rational emotive behaviour therapy among undergraduate students. There was also a guided internet-assisted intervention with reduced depression symptoms after 10 weeks and after follow-up (Ofoegbu *et al.*, 2020), among students in educational technologies.

Focusing on routine primary maternal care, Gureje *et al.* (2019a) found that high-intensity treatment (HIT) had greater benefit for mothers with severe depression, with a higher proportion of adolescent mothers having perinatal depression, exclusively breastfeeding and infant outcomes. Additionally, Gureje *et al.* (2019b) reported on the stepped care intervention (SCI) package integrating four components (behavioural activation; problem-solving therapy; parenting skills training; and person-focused approach via the support of a "neighbourhood mother") for adolescent mothers with perinatal depression and highlighted that a stepped-care, problem-solving intervention combined with enhanced usual care is similarly effective compared to enhanced usual care alone. The mean score of the psychosocial intervention group was lower than that of the control group −1.84, 95% CI (−3.06 to −0.62); p=.003, while there was a better parenting-practice score with a mean difference of 3.4, 95% CI (2.12–4.69); p=.001 at six months postpartum (Gureje *et al.*, 2022). Interventions focused on perinatal depression have shown improved outcomes on maternal and child health, with respect to breastfeeding and decision-making.

An evaluation by Jibunoh and Ani (2021) of a brief psychoeducational intervention failed to show a reduction in anxiety or depressive symptoms among in-school adolescents; however, the post-intervention anxiety scores were lower in the waiting-list group. This indicates that participants' initial symptom burden was high and that a more intensive intervention, including active strategies like cognitive restructuring and exposure, may have been needed. Adewuya *et al.* (2019) compared the outcomes of a stepped care intervention (SCI) with enhanced usual care (eUCA), showing that SCI was more effective in improving the quality of life and had lower rates of disability, death or deliberate self-harm. No difference

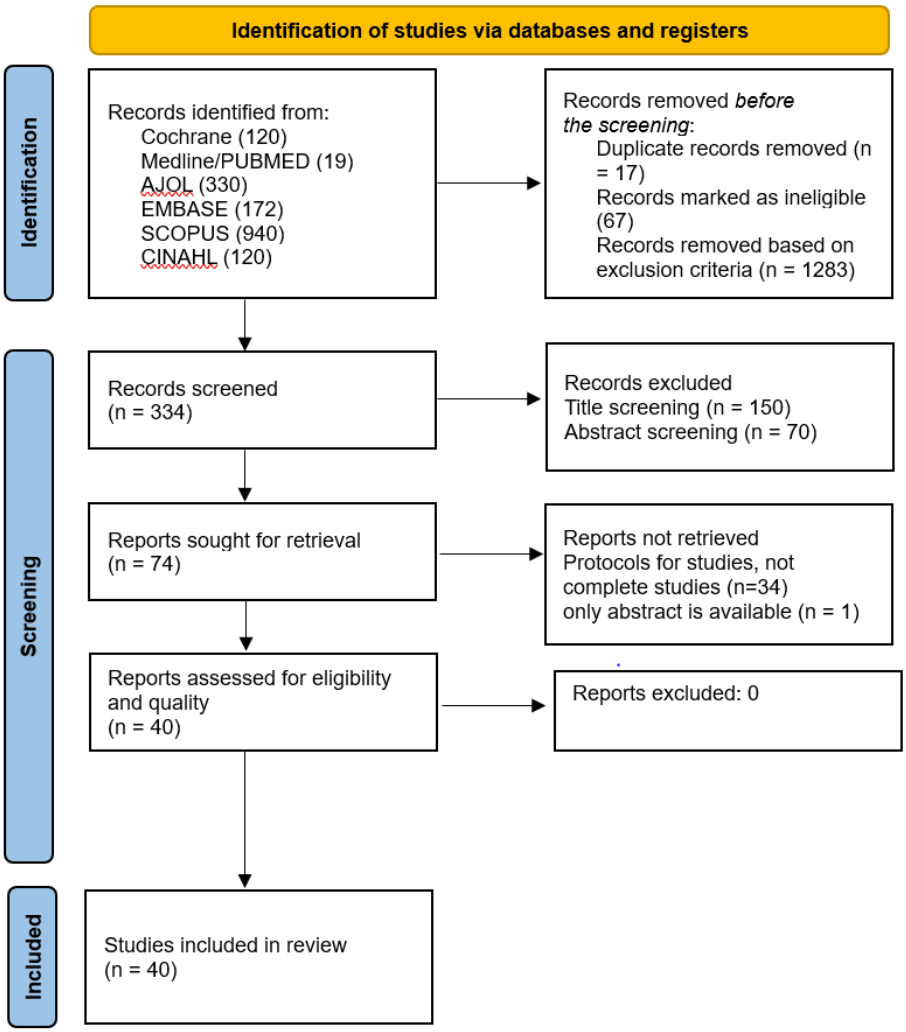


Figure 1: The PRISMA guideline for study selection

was found in clinical outcome at 12 months between the subgroups in the SCI group receiving PST and those receiving the antidepressant. Further, Gureje *et al.* (2019b) reported similar findings with problem-solving therapy; a culturally adapted treatment was associated with better mental health outcomes in the SCI group. The treatments tested for depression are structured, skills-based and multicomponent and are found to be superior to brief information-only treatments.

Interventions focused on anxiety and stress.

As opposed to traditional counselling, rational-emotive behaviour therapy (REBT) reduced mathematics anxiety, and this effect was still maintained at follow-up (Egara & Mosimege, 2025). It also decreased examination anxiety in senior secondary school students ($p<.001$; $F[2,220] =54.66$) without any differences between genders (Eifediyi *et al.*, 2017). In addition, REBT or rational-emotive education also made undergraduates in the fields of English education and religious education experience reduced perceived stress, with effects sustained at follow-up (Ilechukwu *et al.*, 2021; Igbokwe *et al.*, 2019). Ezenwaji *et al.* (2021) investigated group rational-emotive behavioural education and found reduced social anxiety at post-treatment and follow-up among undergraduates. CBT was always linked to decreases in general, social, examination, and subject-specific anxiety, while combined CBT and REBT were consistently linked to decreases in general, social, examination, and subject-specific anxiety. Mindfulness-based CBT is associated with decreased depressive symptoms (Musa *et al.*, 2021b); additionally, a combined CBT and mindfulness-based stress-reduction programme has been shown to reduce test anxiety and improve mindfulness, academic achievement, and well-being among technical and vocational education students (Nwadi *et al.*, 2025). The multivariate effect was significant ($\eta^2=.752$; $p=.001$), and anxiety levels remained lower at the post-test. In a 2-month follow-up, Musa *et al.* (2021a) reported a significant reduction in intellectual disabilities along with a reduction in depression. A total of 12 weeks of CBT-plus-music intervention reduced physics test anxiety at post-treatment and follow-up (Ugwuanyi *et al.*, 2020). Besides, Amoke *et al.* (2020) demonstrated that the effectiveness of CBT alone in improving psychological distress among awaiting-trial inmates in prisons was highly maintained at follow-up assessments.

At post-treatment and follow-up, the critical-thinking intervention resulted in an additional reduction of

Table 4: Extracted data from Included Publication

s/n	citation	Objective	study trial	study location	study population	intervention	study outcome	conclusion
1	Adewuya *et al.* (2019)	The study aimed to evaluate the clinical effectiveness of a developed stepped care intervention (SCI) for management of depression in primary care	Randomised controlled trial	Lagos State, Nigeria	Clinically depressed patients	stepped care intervention (SCI)	Clinical recovery was significantly higher in the SCI group compared with the eUCA group (60.3% vs 18.2%, ARR 3.10, 95% CI 2.15–3.87), by month 12. The intervention group indicated a significantly better quality of life and lesser disability, death or deliberate self-harm rates compared to the eUCA group.	The stepped care intervention significantly improved clinical outcomes at 12 months among clinically depressed patients.
2	Amoke *et al.* (2020)	This study evaluates the effect of cognitive behavioural therapy on psychological distress among awaiting-trial prison inmates in Nigeria	Randomised controlled trial	Enugu State, Nigeria	Prison inmates awaiting trial	cognitive behavioural therapy	CBT had a significant effect on the psychological distress of awaiting-trial prison inmates when compared to their counterparts in the no-intervention group; the efficacy of CBT was significantly sustained at the follow-up measurements.	This suggests that cognitive behavioural therapy decreases psychological distress among inmates awaiting trial, with the benefit of the intervention persisting over time.
3	Anichebe *et al.* (2024)	This study examined the usefulness of drama and music therapies as communication strategies for reducing symptoms of post-traumatic stress disorder (PTSD) and generalised anxiety disorder (GAD) among school children (aged 10–16) who were victims of the 2022 floods in Nigeria.	quasi-experimental	Kogi State, Nigeria	school-aged children (victims of flood)	drama and music therapies	The school children in the drama and music therapies reported a significant reduction in PTSD and GAD symptoms; the reduction is statistically significant, with boys reporting a greater reduction than girls and highlighting drama therapy as contributing more to the reduction in PTSD symptoms, while music therapy contributes more to the reduction of GAD symptoms.	This shows that both drama and music therapies are associated with reduced symptoms, indicating the interventions may be beneficial therapies.

4	Atilola *et al.*, 2022	This study aims to determine the impact of a school-based training program on depression literacy among a cohort of high-school students and their teachers in South-West Nigeria.	quasi-experimental	Oyo, Ogun, and Osun in South-West	Students and teachers	Break Free from Depression	At post-test, knowledge, attitude, and confidence among students showed a significant positive difference. The same was observed among teachers, except for attitude, where positive change did not reach a significant level (p=0.06).	School-based depression-literacy programs can lead to significant positive change in knowledge, attitude, and confidence of students and teachers.
5	Bellaâ-Awusah *et al.*, 2016	This study aimed to determine the effects of a school-based cognitive behavioural therapy programme (CBT) on depressed adolescents in South West Nigeria.	Randomised controlled trial	Ibadan, South West Nigeria	depressed Adolescents	Brief school-based, group cognitive behavioural therapy	The intervention was maintained with significantly lower depression scores 16 weeks post-intervention than baseline, revealing a large effect size.	The programme showed good feasibility and promising effectiveness among depressed adolescents.
6	Buhari *et al.*	To assess the willingness and preference for Internet-Based Mental Health interventions among university students using a validated self-administered questionnaire, the Mental Health Literacy Questionnaire (MHLq) and the General Health Questionnaire (GHQ-12).	Randomised controlled trial	Ilorin, Kogi State	university students	Internet-based psychological interventions	Preference for Internet-Based Mental Health intervention compared to Face-to-Face intervention was 27.7%, while 48.6% of respondents were willing to use Internet-Based Mental Health Intervention. The predictors for willingness to use internet-based support were a monogamous family setting, help-seeking behaviour and probable mental illness. In contrast, predictors of preference for Internet-Based Intervention over Face-to-Face therapy were younger age, female gender, a satisfactory relationship with mother and father, self-help strategies and good knowledge of mental health.	Internet-based interventions present a viable option for improving university students' mental health.

7	Dedeke *et al.*, 2025	We aimed to determine baseline adolescents' knowledge and attitudes on mental illness and any changes following a multidimensional MHL program.	Randomised controlled trial	Abeokuta, Ogun State	secondary school children	school-based multidimensional intervention	Post-intervention participants' views on care seeking and willingness for friendship improved, with a significant reduction in concern for personal safety as a reason for unwillingness for friendship.	This strategy could help maintain the positive effects observed in the short term, suggesting that school-based multidimensional interventions may improve MHL. However, additional studies are required to assess the intervention's impact rigorously.
8	Edeh *et al.*, 2022	The objective of this study was to support business educators' and students' mental health against coronavirus trauma using trauma-focused cognitive behavioural therapy (TF-CBT)	Randomised controlled trial	Nsukka, Enugu	university students	trauma-focused cognitive behavioural therapy (TF-CBT).	Through the intervention, the PTSDs and depression arising from the Coronavirus event were significantly reduced in the treatment group, with a significant improvement in the participants' general mental health at the end of the intervention.	The study emphasised that low educational qualifications, PTSD symptoms and negative coping strategies are the factors aggravating the general low mental health of the study participants.
9	Egara and Mosimege, 2025	The study explored the effectiveness of Rational Emotive Behaviour Therapy (REBT) in reducing mathematics anxiety among secondary school students in Nigeria.	Randomised controlled trial	Isoko North LGA, Delta State	secondary school children	Rational Emotive Behaviour Therapy (REBT)	The experimental group received REBT treatment, while the control group received conventional counselling (general sessions on study habits, exam strategies, anxiety management, and time management). The interventions lasted six weeks and consisted of six 90-minute sessions. The students who received REBT experienced a significant decline in mathematics anxiety from pretest to post-test; these improvements were sustained at follow-up.	The mathematics teachers need to closely collaborate with school counsellors and psychologists to identify and support students facing psychological challenges related to mathematics anxiety.

10	Eifediyi *et al.* (2017).	This study investigated the effectiveness of Rational Emotive Behaviour Therapy (REBT) in reducing examination anxiety of senior secondary school students in Edo State.	quasi-experimental	Edo Central and Edo North, Edo State	secondary school children	rational emotive behaviour therapy	The Experimental group was exposed to seven weeks of REBT training, while participants in the control group received Health Education training; the effect of the therapy (REBT) was significant.	REBT approach recorded significant success in reducing examination anxiety of the students.
11	Ene *et al.*, 2021	This study determined the effects of rational emotive occupational health coaching on the management of work stress among academic staff of science and social science education in south-east Nigerian universities	randomised controlled trial	south-east	academic staff	rational emotive behaviour therapy, rational emotive occupational health coaching	The mean stress of the intervention group decreased more over time than that of the control group.	Rational emotive occupational health coaching revealed significant effects on the management of work stress among academic staff of science and social science education.
12	Eseadi *et al.*, 2022	This research was designed to investigate the management of depression among undergraduate religious education students and identify the research implications for school-based religious intervention.	randomised controlled trial	southern Nigeria	undergraduate university students	religious rational emotive behaviour therapy (RREBT)	Compared with students in the control condition, undergraduate religious education students exposed to the intervention showed a significant decline in mean BDI-II scores at post-test, with the effect remaining consistent at the 2-week follow-up.	The effect of RREBT on depression treatment among undergraduate religious education students was positive and consistent.
13	Ewulu *et al.* (2024)	This study aimed to examine the impact of music and art therapies in reducing symptoms of PTSD among children and adults with abduction experiences in Nigeria.	quasi-experimental	Nsukka, Enugu	Children and Adult Victims of Abduction	Interactive Media-Based Music and Art Therapies	There was a significant main effect of the treatment condition and PTSD scores of the participants at Times 1, 2, and 3, respectively. It was found that music therapy was more effective in reducing PTSD symptoms in children, while art therapy was more effective in reducing PTSD in adults.	This study concludes that when children and adults experience abduction, the children category suffers more from mental health challenges than adults. Although music and art therapies are effective interventions in reducing symptoms of PTSD, the effectiveness is, however, age-dependent. Music therapy is more effective with children, while art therapy is more effective with adults.

14	Ezegbe *et al.* (2019)	The study investigated the impacts of cognitive-behavioural intervention on anxiety and depression among undergraduate students enrolled in social science education programs at public universities in Southeast Nigeria	Randomised controlled trial	South-east	university student	cognitive-behavioural intervention	There is a significant positive impact of cognitive-behavioural intervention on anxiety and depression among social science education students exposed to the cognitive-behavioural intervention, showcasing that there was a significant reduction in anxiety and depression. Additionally, the reduction in anxiety and depression persisted 3 months after the intervention.	The cognitive-behavioural intervention was successful in decreasing the symptoms of anxiety and depression in social science education students who participated in the study.
15	Ezenwaji *et al.* (2021)	The research evaluated the impact of a group rational-emotive behavioural education intervention (group rational-emotive behavioural education intervention [REBEI]) on social anxiety symptoms among undergraduate adult education and extra-mural studies students.	randomised controlled trial	south-east	undergraduate university students	group rational-emotive behavioural education intervention	Despite the social anxiety experienced before exposure to the intervention, the social anxiety symptoms of the undergraduate attending adult education and extra-mural studies showed significant reduction at post-treatment and follow-up.	REBEI demonstrated its clinical usefulness in treating undergraduate adult education and extra-mural studies students with social anxiety problems
16	Ezeudu *et al.* (2019)	We assessed the efficacy of a rational-emotive behaviour therapy psycho-educational programme in reducing depression among chemistry education undergraduates in a Nigerian university	Randomised controlled trial	Nsukka, Enugu	undergraduate university students	Rational-emotive behaviour therapy	Rational-emotive behaviour therapy was effective in reducing depression scores.	Rational-emotive behaviour therapy is an effective tool in assisting university undergraduates of chemistry education to manage depression.

17	Gureje *et al.* (2022)	This study aimed to evaluate the effectiveness of a psychosocial intervention for perinatal depression designed specifically to address the unique needs of adolescents who were receiving routine perinatal care in primary maternal care clinics in Nigeria.	Randomised controlled trial	Oyo State, Nigeria	Adolescents with perinatal depression	Combined behavioural activation and problem-solving treatment (PST), parenting skills training; and social and parenting skills support provided by a self-identified adult "neighbourhood mother".	After the six-month postnatal follow-up, the intervention group had lower levels of depressive symptoms than the control group, lower mean EPDS scores, and better parenting practices, with improved mean total HOME-IT scores.	An age-appropriate psychosocial intervention package holds promise for scaling up care for adolescents with perinatal depression, especially in resource-constrained settings. As a structured intervention consisting of problem solving and behaviour activation, as well as parenting skills training delivered by lay health workers, and parenting support provided by a "neighbourhood mother", it is effective in relieving depression and improving parenting skills at the six-month postnatal period among adolescents with perinatal depression
18	Gureje *et al.* (2019a).	To compare high-intensity treatment (HIT) with low-intensity treatment (LIT) for perinatal depression	Randomised controlled trial	Oyo State, Nigeria	antenatal women	High- versus low-intensity interventions	During follow-up assessments, 85% of study participants showed remission rates of 70% with HIT and 66% with LIT (risk difference). The HIT was more effective for severe depression, resulting in a higher rate of exclusive breastfeeding and improved Infant outcomes.	Except among severely depressed perinatal women, there is no strong evidence to recommend high-intensity in preference to low-intensity psychological intervention in routine primary maternal care.
19	Gureje *et al.* (2019b)	The study aimed to compare a stepped care intervention package for depression with usual care enhanced by use of the WHO Mental Health Gap Action Programme intervention guide (mhGAP-IG).	Randomised controlled trial	Ibadan, South West Nigeria	Primary care patients with depressive disorder	stepped-care intervention	Of the 562 (89%) patients in the intervention group and 473 (86%) in the control group who completed 12-month follow-up, similar proportions in each group had remission of depression (425 [76%] in the intervention group vs 366 [77%] in the control group.	For patients with moderate to severe depression receiving care from non-physician primary health-care workers in Nigeria, a stepped-care, problem-solving intervention combined with enhanced usual care is similarly effective to enhanced usual care alone. Enhancing usual care with mhGAP-IG might provide a simple and affordable approach to scaling up depression care in sub-Saharan Africa.

20	Ifeanyieze *et al.* (2023)	The study determined the efficacy of rational career intervention on career self-esteem of students of Agricultural education programme in Universities in Southeast Nigeria	Randomised controlled trial	Nsukka, Enugu	undergraduate university students	Rational career intervention on career self-esteem	The study indicated a strong impact of rational career intervention on career self-esteem levels, revealing that gender interaction effects had a substantial impact on the professional self-esteem scores of students in agricultural education, indicating a statistically significant relationship between time and students' career self-esteem in agricultural education. The follow-up findings showed that the rational career intervention has a long-term impact on career self-esteem among students in Agricultural Education.	Rational career intervention is useful in improving self-esteem among students of agricultural education in universities in Southeast Nigeria.
21	Igbokwe *et al.* (2019)	The objective of the study was to investigate the effect of rational emotive behavioural therapy (REBT) as a stress management intervention among English Education undergraduates in Universities in Southeastern Nigeria.	Randomised controlled trial	Southeastern Nigeria	undergraduate university students	Rational emotive intervention	The REBT program significantly reduced stress among English education undergraduates in the intervention group compared to students in the control group, as measured by the PSS-14. The REBT program maintained the reduction in stress at the 3-month follow-up.	The REBT intervention significantly reduced stress in the intervention group compared to the control group at post-test and follow-up, as measured by PSS-14.
22	Ilechukwu *et al.* (2021)	The objective of this study was to evaluate the effect of an REE program on stress among undergraduate students of religious education programs in Nigerian Universities.	Randomised controlled trial	Southwest Nigeria	undergraduate university students	Rational emotive education (REE)	The REE program resulted in a significant decrease in stress levels among undergraduate students in the religious education program in the treatment group compared with those in the control group. The effect of the REE program was also maintained during follow-up among undergraduate students in the religious education program exposed to it.	The rational emotive education program significantly reduced stress among undergraduate students in the religious education program in the treatment group compared with the control group at post-test and follow-up, as measured by PSS-10.

23	Isa *et al.* (2018)	The study therefore investigates the effects of a psychological intervention that includes psycho-education and basic elements of cognitive behavioural therapy (CBT) on depressed medication-treated adolescents in Nigeria.	Randomised controlled trial	Benin City, Nigeria	Adolescents clinically diagnosed with depressive disorder	Group-based manualised intervention focused on psycho-education and basic CBT strategies	Statistically significant reductions in depressive symptoms were recorded, as were improvements in the adolescents' knowledge of depression, hope, and attitude towards treatment adherence one week after the intervention and were sustained at 4 weeks post-intervention.	This study suggests that combining psycho-education with elements of CBT to antidepressant treatment is feasible, acceptable and can produce further benefits to depressed adolescents.
24	Iyendo *et al.*, (2023)	The study compared the effect of interactive audio-visual-based art and music therapy in reducing post-traumatic stress disorder in adolescents who survived abduction in Nigeria	quasi-experimental	Zamfara and Katsina	school adolescents who have experienced kidnapping	interactive audio-visual-based art and music therapy	Interactive audio-visual art therapy and music therapy are effective intervention strategies for the reduction of PTSD among school adolescents who have experienced kidnapping in Nigeria. However, art therapy is more effective in reducing PTSD than music therapy.	These results could contribute to the creation of a useful manual for organising and carrying out interventions aimed at adolescents who have experienced abductions.
25	Jibunoh and Ani (2021)	The study evaluated whether psycho-education can significantly reduce anxiety symptoms among Nigerian adolescents.	Randomised controlled trial	Lagos State, Nigeria	in-school adolescent	brief psychoeducational intervention	Brief psycho-educational intervention for anxiety was not effective in reducing anxiety or depressive symptoms; this can be attributed to a lack of power in the sample size because the waiting-list control group had significantly lower post-intervention anxiety scores compared with the intervention group.	Psycho-educational intervention for adolescents with anxiety was not effective in reducing either anxiety or depressive symptoms. The adolescents' baseline anxiety symptoms were very high and probably required a more intensive intervention that should have included cognitive restructuring and exposure tasks. The small sample size, reliance on self-report measures, and short follow-up limited the study.

26	Jidong *et al.* (2025)	The study aimed at assessing the effect of CaMaPI on self-harm and suicidal ideation among adolescents with a history of self-harm and suicidal ideation.	Randomised controlled trial	Jos, Nigeria	Adolescents/ Young People With a History of Self-Harm and Suicidal Ideation	Culturally Adapted Manual-Assisted Psychological Intervention (CaMaPI)	Reduction in self-harm and suicidal ideation was higher in CaMaPI on the suicide and self-harm scale, with no significant reduction in hopelessness. The themes that emerged from the qualitative findings showed acceptance of self-harm and suicidal ideation as a treatable condition, mood management and behaviour modification, alongside cultural appropriateness and positive experience of the CaMaPI.	CaMaPI is feasible, culturally appropriate and acceptable in reducing self-harm and suicidal ideation in adolescents/young people with histories of self-harm and suicidal ideation in Nigeria.
27	Liu *et al.* (2023)	The study looked at how exposure to interactive TV-based music and art therapy could assist in reducing suicidal thoughts of secondary school female children who survived abduction in Nigeria	quasi-experimental	Zamfara, Katsina and Niger	school children who survived abduction	interactive audio-visual based art therapy and music therapy	Interactive TV-based art and music therapy produced a lower score for suicidal ideation compared to the control group that was not exposed to any form of therapy aside from routine clinic checkups. Specifically, those exposed to interactive TV-based art therapy reported a lower suicidal ideation score than the music and control groups. The outcome was sustained even after a three-month follow-up.	Interactive TV-based art therapy and music therapy aid in the reduction of suicidal ideation among female children who have experienced abduction. Moreover, those exposed to interactive TV-based art therapy reported lower mean scores for suicidal ideation than those exposed to music therapy.

28	Musa *et al.* (2021a)	The objective of this paper was to examine the efficacy of mindfulness-based cognitive therapy (MBCT) in decreasing depressive symptoms and intellectual disabilities (ID) among individuals with depression in Nigeria.	Randomised controlled trial	Sokoto State, Nigeria	depressed individuals with disabilities	mindfulness-based cognitive therapy	The Mindfulness-Based Cognitive Therapy (MBCT) group has shown a statistically significant effect on the Shaheen Disability Scale (SDS) and Beck Depression Inventory (BDI-II) variables by decreasing depressive symptoms and disabilities following exposure to the intervention. The assessment revealed that participants reported an improvement in their experience of depression and ID. The most significant impact was in the reduced levels of ID reported, suggesting that depressed people with intellectual disabilities benefit from a structured MBCT group intervention and the results were maintained at the 2-month follow-up.	The findings of the study reveal that mindfulness-based cognitive therapy intervention improved depression and disability symptoms in depressed patients with disabilities. This supports the implications for psychotherapy in intellectually disabled patients who suffer from depression.
29	Musa *et al.* (2021b)	The study examined the effectiveness of MBCT versus the control group (CG) in reducing depression symptoms.	Randomised controlled trial	Sokoto State, Nigeria	depressed patients	Mindfulness-Based Cognitive Therapy	At the end of the 8 weeks of MBCT intervention, MBCT participants did not have significantly fewer depressive symptoms compared to those in the CG. However, the MBCT group had a significant reduction in depressive symptoms after 2 months' follow-up.	The findings suggest that MBCT is associated with decreased depressive symptoms. The findings indicate that MBCT is useful for reducing depressive symptoms at a 2-month follow-up.

30	Nwadi *et al.* (2025)	This study explored the combined effects of cognitive-behavioural therapy and mindfulness-based stress reduction in reducing test anxiety among business education students in a measurement and evaluation. course.	Randomised controlled trial	Enugu and Ebonyi States, Nigeria	undergraduate university students	Cognitive behavioural therapy and Mindfulness-Based stress reduction program	The results reveal that TVET students who were exposed to the CBT-MBSR intervention had significantly lower post-treatment test anxiety scores than those in the wait-list control group. The intervention also had a significant multivariate effect on reducing test anxiety, improving mindfulness, students' academic achievement, and their wellbeing.	The findings decisively demonstrate the substantial effectiveness of CBT-MBSR in educational settings, consistently showing that the CBT-MBSR intervention significantly reduced test anxiety, with these reductions persisting throughout the study's follow-up assessments. The sustained decline in anxiety most likely created the mental space necessary for improved academic performance, as students were better able to concentrate and engage with their coursework without the cognitive interference of anxiety.
31	Ofoegbu *et al.* (2020)	The objective of the study was to determine the efficacy of guided internet-assisted intervention (GIAI) in reducing depression among educational technology students in Nigerian universities.	Randomised controlled trial	Nigeria	educational technology students	guided internet-assisted intervention (GIAI)	After 10 weeks of exposure to GIAI, there is a significant reduction in depression among students in the treatment group when compared to those in the usual-care control group. The follow-up assessment indicated a further significant reduction in depression among participants in the treatment group when compared to those in the usual-care control group.	The study's findings indicated that GIAI was efficacious in reducing depression among participants in the treatment group when compared to those in the usual-care control group.
32	Ojumu *et al.* (2025)	This study investigated the impact of a Mental Health Literacy (MHL) intervention on reducing mental illness stigmatisation among secondary school students in Ogun State, Nigeria	quasi-experimental	Ogun State, Nigeria	secondary school students	Adapted Mental Health Literacy	Significant differences were observed in the level of knowledge of mental illness stigmatisation between pre-intervention and post-intervention for the IG.	This demonstrates the efficacy of mental health literacy interventions in enhancing the knowledge of secondary school students about mental illness stigmatisation.

33	Pulerwitz *et al.* (2024)	The study evaluated a group-based intervention drawing on cognitive behavioural therapy (CBT) strategies for men who have sex with men (MSM) and transgender women (TGW) at risk for or living with HIV in Lagos, Nigeria.	Randomised controlled trial	Lagos State, Nigeria	Men who have sex with men (MSM) and transgender women (TGW)	Group cognitive behavioural therapy (CBT)	There was significant pre-post improvement in each psychosocial outcome, in both the immediate and delayed arms. There were further positive changes for the immediate intervention group by 3-month follow-up (e.g. in intersectional internalised stigma, depression). Participants post-intervention described (in qualitative interviews) less self-blame, and enhanced social support and resilience when facing stigma, as well as motivation to use PrEP, and indicated that positive changes in psychosocial factors found in the delayed group mainly reflected perceived support.	This study demonstrated the feasibility and acceptability of a group-based CBT model to reduce stigma and support mental health among MSM and TGW in Nigeria.
34	Ugwuanyi *et al.*, (2020)	The study determined the effect of cognitive-behavioural therapy (CBT) with music in reducing physics test anxiety among secondary school students as measured by the Generalised Test Anxiety Scale.	Randomised controlled trial	Enugu State, Nigeria	secondary school students	cognitive-behavioural therapy with music therapy	The participants who were exposed to the CBT-music intervention program had significantly lower test anxiety scores at post-treatment than the participants in the control group. Furthermore, the test anxiety scores of the participants in the CBT-music group were significantly lower than those in the control group at the follow-up measure. Thus, the results showed a significant effect of CBT with music in reducing physics test anxiety among secondary school students.	The study established the efficacy of CBT-music in reducing physics test anxiety among senior secondary school students in southeast Nigeria. The intervention program, which lasted for 12 weeks, produced a significant effect on the management of test anxiety among the participants.

35	Ugwuanyi *et al.*, (2020)	The study determined the impacts of CBT on the management of occupational stress among science and social science education facilitators in ODL centres in South-South Nigeria.	Randomised controlled trial	South-south States	science and social science education facilitators	cognitive behaviour therapy	The CBT intervention significantly decreased occupational stress among science and social science education facilitators in ODL in the South-South region of Nigeria.	This study showed that CBT had a significant impact on the management of occupational stress among science and social science education facilitators in ODL centres in South-South, Nigeria.
36	Ugwuozor *et al.* (2021)	The study objective was to determine the effect of critical thinking intervention (CTI) for stress reduction among undergraduates in Nigerian Universities.	Randomised controlled trial	South-south States	Undergraduate university students	Critical thinking intervention	After the intervention, undergraduates in the treatment group showed significantly reduced stress compared with those in the no-treatment control group. The effect was sustained in the treatment group after follow-up assessment.	CTI intervention was significantly effective in reducing stress among undergraduates in Nigerian Universities.
37	Victor-Aigbodion *et al.*, (2023)	This research sought to determine whether rational emotive behaviour therapy (REBT) can be applied to help manage depression in Nigerian undergraduate medical students.	Randomised controlled trial	Edo, Delta, and Akwa Ibom	undergraduate medical students	rational emotive behaviour therapy (REBT)	The depressive symptoms and their associated irrational beliefs among medical students in the treatment arm were significantly altered by REBT intervention at post-test, and this positive outcome was sustained at follow-up.	REBT intervention significantly improves medical students' ability to overcome depression and irrational beliefs.
38	Xiaolin *et al.* (2025)	This study aims to test the effect of combining art and music therapies administered through interactive television to curtail posttraumatic stress disorder (PTSD) of school children who have experienced kidnapping.	Randomised controlled trial	Zamfara and Katsina States	school-aged children (experienced kidnappings)	interactive television-based music combined with art therapy	Suggesting that interactive TV-based music therapy alone, art therapy alone, and art plus music therapy are effective intervention strategies for reducing the PTSD of school children who have experienced kidnapping in Nigeria. Interactive TV-based art plus music treatment is more successful in reducing PTSD.	When school children are abducted, it negatively impacts their mental health, especially PTSD. The children require assistance to recover from the abduction trauma; music and art therapy are crucial interventions that aid speedy recovery from the trauma of such events. Additionally, it is determined that art therapy in conjunction with music therapy is the most effective way to aid school-age children who have been abducted in their recovery from the trauma of abduction.

39	Xu *et al.*, (2025)	The study examined the efficacy of integrating interactive media-based cognitive behaviour in conjunction with art and music therapy for treating generalised anxiety disorder (GAD) in children abducted in Nigeria.	Randomised controlled trial	Zamfara, Katsina, and Kaduna States	children exposed to abduction	interactive media-based cognitive behaviour therapy with art and music therapies	The findings show that cognitive behaviour therapy combined with art and music delivered through interactive media may be superior for treating paediatric GAD compared with using only CBT, art, or music therapy.	The student's mental health, particularly the degree of GAD, is adversely affected by kidnapping. Critical treatments that speed up the healing from such experiences are art and music therapy, as well as cognitive behaviour therapy. Additionally, CBT combined with art and music works better than art, music, or CBT alone to help children who have been abducted recover from the trauma.
40	Zhang *et al.* (2023)	The study compares the effectiveness of interactive television-based music, art, and poetry therapies in reducing symptoms of posttraumatic stress disorder among school children who have experienced abduction.	Randomised controlled trial	Zamfara, Niger, and Katsina States	children exposed to traumatic events	interactive television-based art, music, and poetry therapies	The findings of the study suggest that interactive television art, music and poetry therapies are an effective intervention strategy for reducing PTSD in school children who have experienced kidnapping in Nigeria. However, art therapy is more effective in reducing PTSD.	Interactive television art, music and poetry therapies are an effective intervention strategy for reducing PTSD in school children who have experienced kidnapping in Nigeria. However, art therapy is more effective in reducing PTSD.

stress among university students (Ugwuozor *et al.*, 2021). Especially with regard to students of Agricultural Education, they have generally experienced a positive change in their career self-esteem based on exposure to rational intervention, with the effect persisting to follow-up (Ifeanyieze *et al.*, 2023). Rational emotive occupational health coaching was found to be effective in managing work stress among academic staff in science and social science education (Ene *et al.*, 2021). Structured interventions with cognitive, behavioural, and/or mindfulness and rational-emotional skills tend to produce positive changes in anxiety and stress in school and university settings.

Trauma-focused interventions utilising creative-arts and multimodal approaches

Anichebe *et al.* (2024) found that for children from 10 to 16 years who were affected by floods, both drama and music therapy had a particular therapeutic effect on reducing the symptoms of PTSD and generalised anxiety disorder (GAD) compared with the control group, particularly for boys. Drama was a more helpful treatment for PTSD, while music was a more helpful treatment for GAD. The difference between interactive audio-visual art and Music therapy modalities was not significant; however, interactive audio-visual art and Music therapy were effective in decreasing PTSD, with music being less effective than art therapy among the adolescents who were kidnapped (Iyendo *et al.*, 2023). Interactive TV-based art and music also decreased suicidal thoughts among abducted female children. However, the art therapy group had lower scores than the music therapy group, and improvement remained at 3 months (Liu *et al.*, 2023). In addition, Xiaolin *et al.* (2025) found that music therapy and art therapy, individually and in combination, were effective in reducing PTSD, with the combined therapy reporting the greatest effect size (.544 compared to .471 for the individual modalities). Interactive TV, art, music and poetry therapies also decreased PTSD, particularly evidenced in art (Zhang *et al.*, 2023).

For abducted children, the combination of CBT and art and music through interactive media generated lower GAD scores than other treatments (CBT, art and music) (Xu *et al.*, 2025). The decline in GAD scores

was consistent in studies that included both children and adults: music was reported to be more effective for children, while art was more effective for adults (Ewulu *et al.*, 2024). These indicate that arts-based interventions generally significantly decrease trauma-related symptoms, especially when paired with more structured psychological interventions.

Interventions targeted at Mental-health literacy, stigma, and help-seeking

The "Break Free from Depression" programme had a greater effect on knowledge than on the attitude and confidence of students (Atilola *et al.*, 2022). A multi-dimensional school intervention program raised mean knowledge scores from 11.89 (SD 2.56) to 13.51 (SD 2.62) and improved some, but not all, domains involving help-seeking behaviour and willingness to make friendships (Dedeke *et al.*, 2025). An adapted mental-health literacy intervention resulted in higher knowledge scores post-intervention and at follow-up than at baseline for the intervention group (Ojumu *et al.*, 2025). This distinction is also supported by Jibunoh and Ani (2021), whose results show that there was no significant increase in anxiety and depression after brief psychoeducation. However, Isa *et al.* (2018) investigated the benefits of psychoeducation with CBT strategies and continued antidepressant treatment; reductions in depressive symptoms were recorded, as were improvements in the adolescents' knowledge of depression, hope, and attitude towards treatment adherence one week after the intervention. The improvements were sustained at 4 weeks post-intervention. Only 48.6% of university students were willing to utilise mental health assistance from the internet, with 27.7% opting for face-to-face assistance (Buhari *et al.*, 2021). Once users interact with therapy, the Ofoegbu *et al.* (2020) trial of a guided internet-assisted programme resulted in a reduction in depression. This means the success of school-based literacy programmes with educational outcomes that are more proximal, highlighting that the symptoms of mental ill health are decreased through literacy interventions.

Interventions for self-harm and suicidal ideation

Jidong *et al.* (2025) reported that a culturally adapted manual-assisted psychological intervention (CaMaPI) for adolescents and young people with a history of self-harm or suicidal ideation was highly acceptable: 100% found it acceptable in the intervention group, and 50% in the treatment as usual (TAU) group. This highlights a reduction in suicide and self-harm within the intervention group. However, neither CaMaPi nor TAU experienced a significant reduction in hopelessness. Also, Liu *et al.* (2023) found that interactive art and music therapy was associated with decreases in suicidal ideation among female abducted children. A group CBT intervention was well-attended and well-received by a mixed-age sample (18–42 years) of men who have sex with men and transgender women. It was linked to reductions in depression symptoms, internalised stigma, social support and resilience (Pulerwitz *et al.*, 2024). This indicates specific protective rather than across-the-board effects on suicide risk.

Gap in Literature

Gains were sustained for 2 weeks to 6 months after treatment, but follow-up was short and typically unreported in included studies. Mental-health literacy programmes reliably increased knowledge and selected attitudes, with no evidence of their effects on clinical symptoms. Low intensity of brief psychoeducation has yielded a null result, which indicates that for high symptom severity adolescents, brief psychoeducation may be insufficient.

Discussion

The review indicates positive effects of mental-health interventions on depression, stress, anxiety, post-traumatic stress, suicidal ideation, literacy, and well-being among Nigerian adolescents and youths. Structured, skills-based, and multicomponent interventions showed the strongest evidence; heterogeneity in populations, comparators, and measures allows the effectiveness of the interventions to be detailed across varying contexts. The tendency toward fewer widespread effects of school-based psychological interventions, notably those cognitive-behavioural interventions, is comparable to the evidence found in broad samples across Africa, where the effects of psychological interventions on common symptoms were found to be more or less effective, depending on the disorder and setting (Tareke *et al.*, 2023). Thus, incomplete follow-up and a greater potential for bias may lead to higher confidence in positive findings, cautions Dieu Yin *et al.* (2025).

The prominence of cognitive behavioural therapy (CBT) and rational-emotive behaviour therapy (REBT) is empirically plausible because both therapies involve teaching young people to challenge unhelpful thinking, manage emotions, and practise adaptive behaviour skills. Oud *et al.* (2019) conducted a meta-analysis of CBT for youth depression and found that after treatment and at follow-up there was evidence of benefits, particularly when using combined therapy (behavioural activation and cognitive restructuring). This is consistent with better Nigerian outcomes with structured therapy than with short psychoeducation; literacy lessens misconceptions but must be integrated, not substituted for, appropriate-dose treatment and referral (Whittingham *et al.*, 2024).

The review identifies interventions that are favourable to trauma healing, which is relevant in any country affected by kidnapping, conflict, displacement and flooding, as in Nigeria, where Art, music and drama can facilitate a reduction in trauma experiences. Li *et al.* (2025b) provide evidence that creative arts interventions are effective in alleviating youth trauma symptoms. However, the effectiveness of different creative arts interventions and the quality of research are heterogeneous, making

the specific modality uncertain. This indicates that such programmes should not be delivered as single activities, but be offered as part of a multi-layered approach to care. Coordinated support is recommended by the World Health Assembly (2024) for safe schools, focused psychological care, specialist referral and families and communities. WHO (2021) guidance also separates universal promotion from indicated treatment for adolescents experiencing mental health symptoms.

Digital approaches to mental-health literacy also need careful and differentiated interpretation, as school programmes have been found to have positive impacts on knowledge and attitudes towards help-seeking. However, knowledge does not always lead to recovery or sustained help-seeking among adolescents (Natalia *et al.*, 2024). WHO (2020) and UNICEF (2022) agree that literacy should be integrated into whole-school systems, with supportive environments, trained staff, early identification, referral, and access to confidential services. Furthermore, digital interventions might make a difference in areas where specialist support is not available; Christ *et al.* (2020) demonstrated that youth anxiety and depression can be decreased using technology-delivered CBT. Low preference for internet care in Nigeria, however, means that digital interventions need to be coupled with human support. Nevertheless, connectivity, cost, privacy, and exclusion need to be addressed before implementation.

Using a four-session lay-provider Shamiri programme that was developed in Kenya, Osborn *et al.* (2021) found that the intervention decreased symptoms of depression and anxiety within seven months among students who had indicated at screening that they experienced such symptoms. In a subsequent trial conducted during the pandemic, no differences were observed relative to active study-skills sessions, highlighting that context and comparator content do impact apparent effects on mental health outcomes for students (Venturo-Conerly *et al.*, 2024). Likewise, Chibanda *et al.* (2016) offer a systems lesson on supervised lay workers providing problem-solving therapy (PST) for friendliness, which showed improved outcomes for common mental disorders in primary care. The Nigerian trials demonstrate similar innovations, but few are available in terms of evidence of adoption, supervision, financing and monitoring after the trial. Therefore, effectiveness must be linked to implementation capacity.

The Mental Health Act (2012) was introduced in Ghana, establishing a Mental Health Authority and advocating decentralisation of mental healthcare. However, in practice, barriers related to the network of personnel and funding continue to constrain adolescent services (Roberts *et al.*, 2014). This is similar to the South African plan to focus on childhood and adolescent care, district teams, task sharing and school prevention and referral for 2023-2030. Implementation, however, relies on the provincial capacity and protected funding (South African National Department of Health, 2023). In contrast, the Australian headspace model highlights the importance of youth pathways linking mental health, physical health, substance use, and vocational services, and evaluations emphasise clinical governance and treatment exposure (Rickwood *et al.*, 2023). Thus, Nigeria should not imitate service structures that are expensive to deliver, but rather apply the principles of governance and integration that are sustainable and culturally sensitive.

Ogunwale (2023) reports that Nigeria now has a policy base, as the National Mental Health Act of 2023 superseded the previous Act with a custodial policy framework and introduced rights, community care, integration, and governance. This is in line with the 2023 National Mental Health Policy, the Suicide Prevention Strategic Framework, and the contextualised mhGAP 3.0 that emphasise prevention, primary-care integration, and state coordination (WHO Regional Office for Africa, 2025). However, the law is not the same as delivery; insufficient insurance, limited workforce, and inconsistent state capacity and costing planning can mean that services for young people might rely on researchers and external partners. The review provides governments with local options that could be prioritised, funded and monitored with local systems.

The mental health response should include a combination of universal, targeted, and clinical support, as per WHO (2020) recommendations in partnership with UNICEF (2022), suggesting the provision of literacy and social-emotional learning and stigma reduction, which follows confidential screening and structured care for symptomatic students at school or university. Backed by a youth-responsive assessment, brief treatment and referral are recommended for youth health care delivery, and coordinated trauma and self-harm pathways are required for emergency-affected areas. This tiered approach is developmentally appropriate in providing care across health, education, and digital platforms. However, there is a need for counsellors, teachers, community health workers and peers with roles, supervision and referral. Following the task-sharing approach recommended by Le *et al.* (2022) is important because training alone is not enough without leadership, resources, community acceptance, and specialist support.

The findings of this review support a cautious, gradual roll-out rather than national replication of all positive programmes. Taking into consideration methodological quality, feasibility, cultural acceptability, and local need when selecting appropriate interventions, with sustained standardised outcomes follow-up, adverse event reporting, and economic evaluation, targeted towards young people affected by conflict, disability, poverty, rural disadvantage, and minority status. These priorities mirror the WHO's Comprehensive Mental Health Action Plan (WHO, 2021; WHO, 2022), which includes rights, universal coverage, prevention, community care, and better information systems. This contributes to the monitoring of SDG 3.4 and suicide mortality (WHO, 2021).

CONCLUSION

The evidence indicates that the interventions have potential to improve mental health outcomes for adolescents and young adults in Nigeria, especially for structured, multi-session, and multicomponent, trauma-focused, and CBT/REBT-based interventions. As noted, there are benefits in the reduction of levels of depression, anxiety, PTSD, academic and social anxiety, stress, self-harm or suicidal ideation, as well as across overall well-being outcomes, with some of these benefits persisting at short- to medium-term follow-up. Furthermore, school-based literacy programs were effective primarily for knowledge outcomes and some stigma/help-seeking outcomes, with limited evidence for symptom outcomes. The evidence is promising but not sufficient to conclude on a pooled effect size, recommend an effective long-term intervention, or draw a definite conclusion about the superiority of one family of interventions over other available interventions.

Recommendation/Implication

Interventions for mental health should be customised to specific groups and contexts, particularly when designing interventions in sensitive and delicate situations. More importantly, in the Nigerian context, interventions must be culturally sensitive to achieve desired outcomes and sustain mental health gains. Combined approaches tend to produce improved, significant mental health outcomes across various populations, especially CBT combined with art or music. This keys into the Nigerian context of appreciation for local and culturally focused arts and music.

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