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Effectiveness of mental health literacy interventions for young people in sub-Saharan Africa: A systematic review

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ABSTRACT

Background: Young people in sub-Saharan Africa face severe mental health issues, including high prevalence rates of mental health disorders, limited access to mental health care, widespread stigma associated with mental illness and poor help-seeking behaviour. Mental health literacy among young people in sub-Saharan Africa is critically low. This review aims to evaluate the effectiveness of the mental health literacy interventions implemented for young people in sub-Saharan Africa.

Method: This review used the PRISMA guidelines. Searches were carried out across three databases which included Medline, PsycINFO and Embase for published articles up to September 2025. The eligibility criteria utilised the SPIDER framework. The Risk of Bias in Non-randomized Studies - of Interventions tool (ROBINS-I) tool and Mixed Methods Appraisal Tool (MMAT) were used to assess the quality of the studies. A narrative approach was used to synthesise this review.

Results: Eleven studies were included. All reported improvement in at least one outcome domain: knowledge improved in all 11 studies, attitudes in 6, stigma in 5, and help-seeking behaviour in 3. Interventions were mainly school-based or multi-component and included psychoeducation, life-skills training, peer or teacher education, radio programmes, and community-linked models. Reporting on accessibility, cost, and workforce requirements was limited.

Conclusion: This review has shown the effectiveness and nature of the mental health literacy interventions targeted at young people in sub-Saharan Africa. Future research should evaluate the long-term effectiveness of existing mental health literacy interventions.

1. Background

Mental health problems often emerge during childhood, affecting over 10% of young individuals worldwide (Kucera et al., 2023; Solmi et al., 2022). Poor mental health is linked to considerable morbidity, a situation likely to be exacerbated in developing regions such as sub-Saharan Africa, where additional factors such as poverty, lack of social protection, and inadequate mental health services further intensify the issue (Atilola, 2014). A study by Olisaeloka, Udokanma and Ashraf (2024) revealed that young people in sub-Saharan Africa face a high burden of mental health issues, with prevalence rates often exceeding those seen in high-income countries. A study by Jörns-Presentati et al. (2021) found median point prevalences of 26.9% for depression, 29.8% for anxiety disorders, and 20.8% for suicidal ideation among adolescents in sub-Saharan Africa. These high rates are attributed to factors such as impoverished living conditions, high HIV/AIDS prevalence, and other risk factors common in low-resource settings (Jörns-Presentati et al., 2021).

Despite the significant mental health needs, there are substantial barriers to care for young people in sub-Saharan Africa (Saade et al., 2023). Low mental health literacy, elevated stigmatisation levels, and weak community-level capacity to address mental health issues are major obstacles (Kutcher et al., 2019). Mental health literacy (MHL) encompasses the knowledge and beliefs regarding mental disorders that facilitate their identification, management, and prevention (Kutcher et al., 2016). It involves understanding how to achieve and maintain positive mental health, identifying mental disorders and their treatment options, and working to reduce the stigma that comes with mental illness(Kutcher et al., 2015). Many young people in sub-Saharan Africa lack basic knowledge about mental health conditions, their symptoms, and available treatments (Saade et al., 2023). This low mental health literacy contributes to delays in help-seeking and accessing appropriate

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care (Amone-P'Olak et al., 2023).

Improving mental health literacy among young people is crucial for enhancing early identification, improving an individual's ability to recognise mental disorders, which is a crucial first step in seeking help, and improving overall mental health outcomes (Bagnell & Santor, 2012). For example, a study in Malawi and Tanzania implemented an integrated approach that included interactive radio programmes, mental health curriculum training for teachers and peer educators in schools, and clinical competency training for community health workers (Kutcher et al., 2019). This multi-faceted intervention improved the mental health literacy of the students and teachers who educate the students and also enhanced the capacity of community health workers to identify and manage mental health problems. Mental health literacy interventions in sub-Saharan Africa have included components such as targeted interventions for vulnerable groups like adolescents, economic support for communities, and the promotion of mental health literacy programmes (Dzinamarira et al., 2024). Mental health literacy is important not only because it increases knowledge, but also because it can support earlier problem recognition, reduce stigma, improve confidence in discussing mental health, and increase readiness to seek appropriate help. In settings where formal services are limited, these functions are particularly relevant because they may strengthen self-recognition, peer support, and pathways to informal or community-based help.

A systematic review by Ma, Anderson and Burn (2023) assessed the effectiveness of mental health literacy interventions and stigma reduction programmes in school settings. Also, another systematic review by Nazari et al. (2023) assessed how mental health literacy can be improved through web-based interventions. A scoping review by Mabrouk et al. (2022) identified various interventions targeting mental health among adolescents in sub-Saharan Africa. Sodi et al. (2022) is assessing the status of mental health literacy among school-going adolescents in sub-Saharan Africa. However, no review to our knowledge has specifically synthesised the effectiveness of mental health literacy interventions for young people in sub-Saharan Africa across delivery settings and outcome domains. This evidence is needed to identify which intervention approaches improve knowledge, attitudes, stigma, and help-seeking in low-resource contexts, and to inform the adaptation, implementation, and evaluation of youth mental health literacy programmes in the region.

1.1. Aim

This systematic review aims to evaluate the effectiveness of mental health literacy interventions targeted at young people in sub-Saharan Africa.

1.2. Objectives

- To systematically search the literature and identify studies that meet the inclusion criteria.
- To identify the nature and content of mental health literacy interventions for young people in sub-Saharan Africa.
- To assess the effectiveness of the various components of the mental health literacy interventions.

2. Methods

2.1. Search strategy

The systematic review was done following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021), and the protocol for this systematic review has been registered on Prospero with the registration link (https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=540101). With the guidance of the Warwick Medical School librarian, the search strategy employed a combination of MeSH terms and free-text keywords related to the key concepts: mental health literacy, interventions, young people, and sub-Saharan Africa. These terms were combined using Boolean operators (AND, OR) to create a search string. The search was conducted across three electronic databases, which are MEDLINE, PsycINFO, and EMBASE from inception till September 2025. Refer to the appendix in the supplementary document for an example of a search in all of these databases. Backward and forward citation searching of included studies and relevant review articles was also undertaken to identify additional eligible records. The search was limited to studies in English.

2.2. Inclusion and exclusion criteria

This systematic review uses the SPIDER framework to structure the inclusion criteria, focusing on the effectiveness of mental health literacy interventions for young people in sub-Saharan Africa (Table 1).

2.3. Selection process

Two independent reviewers conducted the screening process using Covidence software (ww w.covidence.org, n.d.). Initially, the titles and abstracts of the studies identified through the comprehensive search strategy against the predefined inclusion and exclusion criteria were screened. Studies that potentially met the criteria were then moved to the full-text screening stage. In this stage, the reviewers assessed the complete articles to determine their eligibility for inclusion in the review. Disagreements between the reviewers during both screening stages were resolved through discussion and by consulting a third reviewer. This process ensured a thorough and unbiased selection of relevant studies for the review. The reasons for excluding studies at the full-text stage were documented. A PRISMA flow diagram was created to illustrate the number of studies identified, screened, assessed for eligibility, and ultimately included in the review.

2.4. Data extraction

Covidence Software was used to extract data from the relevant studies. The extracted data included author/year, study location, study design/sample size, population description, description of intervention, outcome measured, and key findings (effectiveness).

Table 1
Inclusion and exclusion criteria.

Inclusion Criteria	Exclusion Criteria
Sample: Young people residing in sub-Saharan Africa, aged 10–24 years	Studies not specifically focusing on the sub-Saharan African population or including participants outside the 10–24 years age range.
Phenomenon of Interest: Mental health literacy interventions, including school-based programmes, community initiatives, digital/online platforms, and educational programmes.	Studies focusing on interventions not directly related to mental health literacy.
Design: Randomised controlled trials (RCTs), cohort studies, case-control studies, cross-sectional studies, quantitative studies, qualitative studies, and mixed-methods studies.	Opinion pieces, editorials, and reviews that do not present original research data.
Evaluation: Outcomes related to mental health literacy, such as increased knowledge, reduced stigma, improved attitudes, and enhanced help-seeking behaviour.	Studies with incomplete data or insufficient detail on the mental health literacy intervention and outcomes
Research Type: Evaluation of the effectiveness of mental health literacy interventions.	Evaluations not measuring the effectiveness of the interventions.

2.5. Quality assessment

The systematic review included a combination of quantitative and mixed-methods studies. To critically assess the quality of these studies, two standardised tools were utilised. The ROBINS-I (Risk of Bias in Non-randomised Studies - of Interventions) tool was used for the quantitative studies because they were non-randomised controlled studies and the Mixed Methods Appraisal Tool (MMAT) which examines five items, with distinct sections for scoring the qualitative and quantitative components of each mixed-method study was used for the mixed studies.

2.6. Data analysis and synthesis

The data analysis and synthesis for this systematic review employed a narrative approach due to the heterogeneity of the included studies. After data extraction using a standardised form, a thorough analysis of the extracted information was conducted. This involved summarising and tabulating key characteristics of the studies, including study design, sample size, intervention details, and reported outcomes. The analysis focused on identifying patterns, trends, and commonalities across the studies, as well as noting any discrepancies or unique findings. The effectiveness of mental health literacy interventions was assessed by examining reported outcomes such as changes in knowledge, attitudes, behaviour and stigma reduction. The narrative synthesis provided a comprehensive overview of the current evidence on mental health literacy interventions for young people in sub-Saharan Africa, highlighting key findings, strengths, limitations and implications for future research. A meta-analysis was not undertaken because the included studies were highly heterogeneous in study design, intervention content, delivery setting, outcome domains, measurement tools, and follow-up periods. Several studies also used mixed-methods or feasibility-oriented designs, which limited the appropriateness of statistical pooling. A narrative synthesis was therefore considered the most suitable approach.

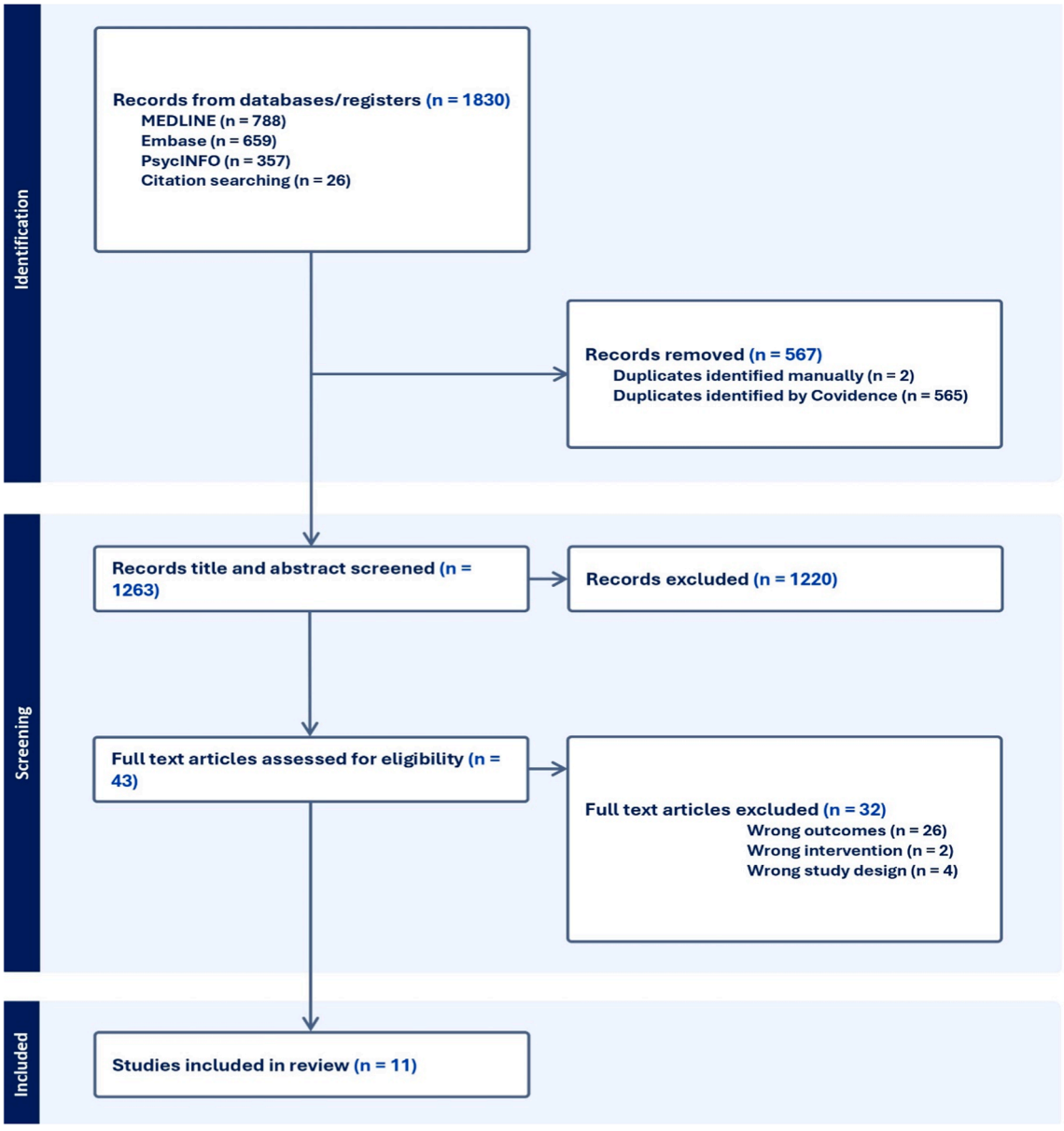

Fig. 1. Prisma flowchart.

3. Results

3.1. Study selection

A total of 1830 records were identified from the three databases: MEDLINE (788), Embase (659), PsycINFO (357), and citation searching (26). After removing 567 duplicates (2 manually and 565 by Covidence), 1263 records were screened. Of these, 1220 were excluded. The remaining 43 records were retrieved and assessed for eligibility, resulting in 32 exclusions due to wrong outcomes (26), wrong intervention (2), and wrong study design (4). A study by Jumbe et al. (2022) almost met all the inclusion criteria but was excluded because it did not evaluate the effectiveness of a mental health literacy intervention, it rather described community engagement and formative qualitative work feeding into a subsequent pilot trial of an e-curriculum. Also, a study by Mindu et al. (2023) was not included because there was no mental health literacy intervention delivered. Ultimately, 11 studies were included in the review (Fig. 1).

3.2. Study characteristics

Studies were conducted in Nigeria (n = 4), Kenya (n = 3), Malawi (n = 2), Tanzania (n = 2), and South Africa (n = 1). Study designs varied: six used quantitative methods but none was a randomised controlled trial, and five employed mixed methods. Sample sizes ranged from 40 to over 4600 participants. The populations involved include adolescents, school children and students with ages ranging from 10 to 20 years. Interventions included psycho-education, mental health awareness programmes, radio programmes, life skills training, and trauma-informed psychoeducation. Outcomes measured involved mental health knowledge, anxiety, depression, stigma, help-seeking behaviour, academic performance, and self-esteem, with most studies reporting significant positive impacts on the targeted outcomes (Table 2).

3.3. Risk of bias and quality appraisal

For quantitative studies, the ROBINS-I tool (Table 3) revealed that some studies (n = 6) were of low risk and medium risk bias. For the mixed studies, the MMAT tool (Table 4) revealed that some studies (n = 5) satisfied all the criteria of MMAT.

The ROBINS-I tool was used to assess the risk of bias across the quantitative studies (n = 6) using a predefined set of domains, identified as D1 through D7. The outcome of this appraisal highlighted the strengths and weaknesses in the methodologies of these studies, identifying areas where biases might have occurred, such as selection, performance, detection, attrition, reporting, and other biases relevant to the effectiveness of the mental health literacy interventions for young people in sub-Saharan Africa.

The Mixed Methods Appraisal Tool (MMAT) was used to appraise the quality of the mixed method studies (n = 5). Each study, conducted by different authors, was been assessed across five quality criteria. The outcome of the appraisal shows that all five studies authored by Coetzee et al. (2024); Hamwaka (2015); Kutcher et al. (2017); Kutcher et al. (2019), and Mutahi et al. (2024) met all five quality criteria comprehensively. This indicates a high level of methodological rigour and quality in the studies included in this review, as they all satisfied the essential requirements for a mixed-methods approach and thereby reflecting reliability and validity in their findings. No study was excluded solely on the basis of quality appraisal. Instead, risk-of-bias findings were used to interpret the strength of the evidence, especially for non-randomised studies with potential concerns in key ROBINS-I domains. We now report the domains most commonly affected and discuss how these limitations temper confidence in the observed effects.

3.4. Study findings

Table 5 categorises the interventions included in this review into school-based and community-based interventions. The school-based interventions include curriculum-based programmes, teacher training, and peer education models (Atilola et al., 2022; Bella-Awusah et al., 2014; Coetzee et al., 2024; Hamwaka, 2015; Jibunoh & Ani, 2022; Kutcher et al., 2017; Ndetei et al., 2022; Oduguwa et al., 2017). Community-based interventions include programmes integrating mental health literacy into community activities, such as radio programmes, healthcare provider training, and trauma-informed psychoeducation (Im et al., 2018; Kutcher et al., 2019; Mutahi et al., 2024).

Table 6 categorises the studies in this review according to the primary focus of each intervention. Three studies (Atilola et al., 2022; Kutcher et al., 2017, 2019) appeared in multiple categories, reflecting the multifaceted nature of their interventions.

Table 7 categorises the outcomes of these interventions into four key domains which inlcude improvement in knowledge, change in attitude, help-seeking behaviour, and stigma reduction. Most interventions reported an improvement in knowledge, indicating that the educational component of these interventions is effective across various settings.

Improvement in knowledge was the most consistent finding across settings. In contrast, behavioural outcomes such as help-seeking improved in only a minority of studies and were more likely to be observed in interventions that were multi-component and linked young people to teachers, peers, or community and health-service structures. Stigma reduction appeared more common in interventions that included explicit anti-stigma, peer-led, or community engagement elements, whereas brief stand-alone psychoeducational approaches showed more limited effects beyond knowledge gain.

Attitude changes were also observed in six studies (Atilola et al., 2022; Hamwaka, 2015; Im et al., 2018; Kutcher et al., 2017, 2019; Oduguwa et al., 2017) reflecting a shift towards more positive perceptions of mental health and illness.

Three interventions led to improved help-seeking behaviours (Kutcher et al., 2017, 2019; Mutahi et al., 2024). Five studies showed a reduction in stigma (Atilola et al., 2022; Coetzee et al., 2024; Hamwaka, 2015; Kutcher et al., 2019; Oduguwa et al., 2017).

4. Discussion

In this systematic review, a total of 1830 journal articles were initially screened, resulting in the selection of 11 articles that provided insights into mental health literacy interventions for young people in sub-Saharan Africa. The findings of this review indicate the effectiveness of these interventions across different settings within the region. Among the included studies, six employed quantitative methods, while five utilised mixed-method approaches. The quality of the studies included in this systematic review is mixed, with both strengths and limitations. Some studies demonstrated methodological rigour through the use of controlled trials, but none were randomised, and the inclusion of both immediate and follow-up assessments. Additionally, the use of culturally adapted materials in some interventions in this review reflects an awareness of the importance of cultural relevance in mental health literacy interventions, potentially improving their impact and acceptability. However, some studies in this review suffered from small sample sizes, limited geographic scope, and short intervention durations, which constrain the generalisability and sustainability of the findings.

4.1. School-based and community-based interventions

School-based mental health literacy interventions have shown consistent effectiveness in improving mental health knowledge among young people (Ma et al., 2023). A meta-analysis by Amado-Rodríguez et al. (2022) found significant increases in mental health knowledge post-intervention among young people in school settings. This review

Table 2
Characteristics of the studies included in the systematic review. (n = 11).

S/N	Author/Year	Study Location	Study Design/ Sample Size	Population Description	Description of Intervention	Outcomes Measured	Key Findings (Effectiveness)
1	Jibunoh and Ani (2022)	Lagos, Nigeria	Quantitative methods (Controlled clinical trial with intervention and control groups) *n* = 40	Adolescents aged 13–16 years.	Three sessions of group-based psycho-education about anxiety and relaxation techniques.	Anxiety symptoms using Spence Children's Anxiety Scale (SCAS), depressive symptoms using Short Mood and Feelings Questionnaire (SMFQ)	The psycho-educational intervention was not effective in reducing anxiety symptoms; no significant effect on post-intervention SCAS or SMFQ scores
2	Atilola et al. (2022)	South-West Nigeria (Oyo, Ogun, and Osun)	Quantitative methods (Quasi-experimental post-pre interventional study) n = 3098	School-going adolescents and their teachers.	Adapted "Break Free from Depression" curriculum, a 4-module depression awareness programme	Depression literacy (knowledge, attitudes, and confidence)	Significant positive changes in knowledge, and confidence among students and teachers' post-intervention. The greatest effect size was observed in knowledge.
3	Ndetei et al. (2022)	Makueni and Machakos counties, Kenya	Quantitative methods (one-group pre-post intervention study) n = 1848	Primary school children, (lower primary: classes 2–4, ages 10–13; upper primary: classes 5–7, ages 13–15)	Life skills training based on the Ministry of Education (MoE) curriculum, focusing on critical/creative thinking, effective communication, empathy, decision making, stress management, and internal locus of control; 8 h of training spread over four weeks	Academic performance (aggregate marks and individual subjects), mental health indicators (Youth Self Report (YSR) and Child Behaviour Checklist (CBCL)	Significant improvement in overall academic performance, improvement in mental health indicators (YSR and CBCL scores), predictors of academic performance included parental education levels, region, and class for lower primary; region, class, and age for upper primary
4	Kutcher et al. (2019)	Malawi (Lilongwe, Salima, Mchinji) and Tanzania (Meru, Arusha)	Mixed methods (prospective longitudinal cohort studies, cluster-controlled designs, and cross-sectional comparisons) n = exact numbers not provided.	Youth aged 15–19 in Malawi and Tanzania, including school students and community health workers.	Integrated Approach to Addressing Depression (IACD) involving radio programmes, school curriculum, and community health training.	Mental health literacy (knowledge, attitudes, help-seeking efficacy), capacity to identify and treat depression.	Significant improvements in mental health literacy among students and teachers, enhanced capacity of community health workers to identify and treat depression, and positive feedback on radio programmes.
5	Bella-Awusah et al. (2014)	Ibadan, Nigeria	Quantitative methods (Quasi-experimental with intervention and control groups) n = 154	Secondary school students aged 10–18 years. participants (78 intervention, 76 control)	A single 3-hour mental health awareness session delivered through didactic lectures, group discussions, and case vignettes.	Knowledge about mental illness, attitude towards persons with mental illness, social distance from persons with mental illness.	Significant increase in knowledge scores in the intervention group at immediate post-intervention and six months post-intervention compared to control group; no significant differences in attitude and social distance scores.
6	Oduguwa, Adedokun and Omigbodun (2017)	Southwest Nigeria	Quantitative methods (Quasi-experimental with intervention and control groups) n = 205	Youth aged 14.91 years (±1.3), 205 participants.	5-hour mental health training session over 3 days including didactic lectures, case history presentations, discussions, and role-play	Knowledge about mental illness, attitude towards persons with mental illness, social distance from persons with mental illness	Significant increase in knowledge and attitude scores in the intervention group compared to the control group; sustained improvement at 3 weeks post-intervention.
7	Hamwaka (2015)	Malawi (Salima, Lilongwe, Mchinji)	Mixed methods (post-training assessment using surveys and group discussions) n = 141	Youth aged 12–20 years, 141 participants (105 youth peer health educators, 36 teachers). Participants from 35 schools.	Peer mental health education training for in-school youth and teachers.	Improved learner performance, access to mental health information, teacher–learner relationships, mental health literacy, reduced stigma and discrimination, learner–learner relationships, school–community relationships, access to mental health services, and time management.	Positive impacts reported in all thematic areas, ranging from 64% (improved time management) to 92% (improved learner performance). Improved access to mental health information, reduced stigma, and enhanced teacher–learner relationships.
8	Im et al. (2018)	Eastleigh, Nairobi, Kenya	Mixed-methods (Pre-post intervention evaluation focus	Somali refugee youth, average age = 20 years (SD = 2.42).	Trauma-Informed Psychoeducation (TIPE), 12-session peer-led intervention	PTSD symptoms, perceived social support, emotional coping, problem-solving skills, sense of community,	Significant improvements in PTSD symptoms for high PTSD baseline group, increased self-awareness

(*continued on next page*)

Table 2 (*continued*)

S/N	Author/Year	Study Location	Study Design/ Sample Size	Population Description	Description of Intervention	Outcomes Measured	Key Findings (Effectiveness)
			group discussions) n = 141			awareness around mental health needs	of symptoms for low PTSD group, increased social support and sense of community
9	Kutcher et al. (2017)	Tanzania	Mixed methods (longitudinal observational study and qualitative evaluations) n = not clearly stated	Teachers and students in secondary schools in Tanzania. Sample size: 32 teachers from 29 schools, over 4600 students exposed to the Guide.	The African Guide (AG), a school-based mental health literacy curriculum adapted from a Canadian resource.	Number of classes taught, number of students exposed to the Guide, number of mental health discussions, number of teachers trained, students approaching teachers for mental health concerns, and referrals to healthcare providers.	Significant positive impact on mental health literacy activities and outcomes. Teachers reported improved student knowledge, attitudes, and behaviours regarding mental health.
10	Mutahi et al. (2024)	Kariobangi (Nairobi County) and Rhonda (Nakuru County), Kenya	Mixed-methods (pre-post comparisons, thematic analysis of interviews and focus groups) n = 469	Out-of-school adolescents, ages 15–18 years, 469 participants (55% female)	Integration of mental health management into existing empowerment group sessions, using WHO Problem Management Plus (PM+)	Feasibility (enrollment, retention, fidelity), acceptability (participant and mentor feedback), mental health literacy, emotional coping, social support	High feasibility and acceptability, improved mental health literacy, increased social support, stress management skills, and problem-solving abilities
11	Coetzee et al. (2024)	Western Cape, South Africa	Mixed-methods (Pilot feasibility and acceptability trial and pre-post exploratory analysis) n = 222	Grade 5 learners, age mean = 10.62 years (SD = 0.69).	4 Steps To My Future (4STMF), 8-session, CBT-based program	Feasibility (participation rates, attendance, fidelity), Acceptability (teacher and learner feedback), Self-esteem, Emotion regulation	High feasibility and acceptability, significant improvements in self-esteem and emotion regulation

Table 3
Risk Of Bias and Quality Appraisal Using ROBINS-I (Risk of Bias in Non-randomised Studies - of Interventions) Tool.

Studies	D1	D2	D3	D4	D5	D6	D7
(Jibunoh & Ani, 2022)	🔴	🟡	🟢	🟢	🟢	🟡	🟡
(Ndetei et al., 2022)	🟢	🟡	🟢	🟢	🟢	🟡	🔴
(Oduguwa et al., 2017)	🟢	🟡	🟢	🟡	🟢	🔴	🟡
(Atilola et al., 2022)	🟡	🔴	🟢	🟡	🟡	🟡	🟢
(Im et al., 2018)	🟢	🟡	🟢	🔴	🟡	🟡	🟢
(Bella-Awusah et al., 2014)	🔴	🟡	🟢	🟢	🟡	🟡	🟡

Codes
🔴 High Risk
🟡 Medium Risk
🟢 Low Risk

ROBINS-I (Risk of Bias in Non-randomized Studies – of Interventions)
D1. Bias Due to Confounding
D2. Bias in Selection of Participants
D3. Bias in Classification of Interventions
D4. Bias Due to Deviations from Intended Interventions
D5. Bias Due to Missing Data
D6. Bias in Measurement of Outcomes
D7. Bias in Selection of the Reported Results

Table 4
Mixed Methods Appraisal Tool (MMAT) mixed methods quality assessment criteria met (n = 5).

Author	1	2	3	4	5
(Kutcher et al., 2017)	✔	✔	✔	✔	✔
(Hamwaka, 2015)	✔	✔	✔	✔	✔
(Coetzee et al., 2024)	✔	✔	✔	✔	✔
(Kutcher et al., 2019)	✔	✔	✔	✔	✔
(Mutahi et al., 2024)	✔	✔	✔	✔	✔

Symbols: ✔ = yes

MMAT (mixed methods appraisal tool)
1. Is there an adequate rationale for using a mixed methods design to address the research question?
2. Are the different components of the study effectively integrated to answer the research question?
3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?
4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?
5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

identified nine school-based mental health literacy interventions. These school-based interventions typically include components such as education about mental health disorders, strategies to maintain mental well-being, and skills for recognising mental health issues in oneself and others (Akpan et al., 2024; Wei et al., 2024). These interventions leverage the school environment, which is often seen as a protective factor for young people, promoting resilience and better mental health outcomes (Bandeira, 2023). The advantage of school-based mental health literacy interventions include their ability to reach a broad audience, as schools provide a unique setting to deliver mental health education without the barriers often present in external interventions (Wei et al., 2024). Additionally, these interventions can be tailored to address the specific needs of diverse student populations, considering factors such as ethnicity and language proficiency, which can influence the outcomes of the interventions (Fretian et al., 2023). However, while the school-based interventions evaluated in this review all showed improvement in knowledge, the effectiveness of these interventions in fostering long-term behavioural change, such as sustained help-seeking, is not well-supported in this review. Also, they often lack the necessary resources and trained personnel to sustain long-term impact (Kutcher et al., 2019).

This review identified four community-based mental health literacy interventions. These interventions aimed to integrate mental health literacy into existing community health frameworks. These

Table 5
Categories of Mental Health Literacy Interventions in the Studies Reviewed.

Studies	School-based Intervention	Community-based Intervention	Contents of the Intervention
Coetzee et al. (2024)	Yes	No	Cognitive-behavioural therapy principles, self-esteem enhancement, emotional regulation, problem-solving, and parent involvement.
Kutcher et al. (2017)	Yes	No	Mental health literacy curriculum, teacher training, peer-based training, integration into school curricula.
Jibunoh and Ani, (2022)	Yes	No	Psycho-education on anxiety, relaxation techniques, role plays, group discussions, and relaxation practice.
Hamwaka (2015)	Yes	Yes	Peer education, training of peer educators, mental health literacy, backstopping and support activities.
Kutcher et al. (2019)	Yes	Yes	Mental health literacy curriculum, teacher training, peer education, community-based radio programmes, and healthcare provider training.
Ndetei et al. (2022)	Yes	No	Life skills curriculum, critical thinking, decision-making, stress management, empathy.
Oduguwa, Adedokun and Omigbodun, (2017)	Yes	No	Mental health awareness, stigma reduction, role plays, group discussions, and lectures.
Im et al. (2018)	No	Yes	Trauma education, peace education, conflict resolution, emotional coping, and community support
Bella-Awusah et al. (2014)	Yes	No	Mental health awareness, behaviours indicating mental health issues, peer support, mental health strategies, group discussions, and local language clarification.
Mutahi et al. (2024)	No	Yes	Problem Management Plus (PM+), mental health literacy, stress management, relationship strengthening, and behavioural activation.
Atilola et al. (2022)	Yes	No	Mental health awareness, behaviours indicating mental health issues, peer support, mental health strategies, and group discussions

interventions typically include components such as peer education, radio programmes, community health training, psychoeducation, stigma reduction activities, and information on accessing mental health services. Community-based interventions have the advantage of being more adaptable to local contexts and can engage families and community leaders, which is crucial for reducing stigma and promoting mental health (Akpan et al., 2025; Petersen et al., 2013). However, community-based interventions often face challenges related to resource limitations especially in low-income settings like sub-Saharan Africa, and the need for ongoing training and support for community health providers (Lund et al., 2015). Additionally, while community-based interventions can be culturally sensitive and tailored to specific populations, they may not reach as many young people as school-based programmes due to logistical constraints (Kutcher et al., 2019).

Table 6
Focus of the mental health literacy interventions.

Focus of Intervention	Studies	N
Mental Health Awareness	Bella-Awusah et al. (2014; Hamwaka (2015); Kutcher et al. (2017); Atilola et al. (2022); Ndetei et al. (2022)	5
Stigma Reduction	Bella-Awusah et al. (2014); Oduguwa, Adedokun and Omigbodun, (2017); Atilola et al. (2022)	3
Emotional Regulation and Coping Skills	Im et al. (2018); Jibunoh and Ani, (2022); Coetzee et al. (2024)	3
Depression Identification and Management	Kutcher et al. (2019); Atilola et al. (2022)	2
Teacher and Peer Education	Hamwaka (2015); Kutcher et al. (2017), Kutcher et al. 2019)	3

4.2. *Focus of the mental health literacy interventions*

Five studies in this review focused directly on mental health awareness. Research indicates that increased mental health awareness is associated with improved help-seeking behaviours among young people (Glazzard & Szreter, 2020; Simkiss et al., 2020). One of the studies in this review demonstrated that implementing a school mental health literacy curriculum in a sub-Saharan African country significantly improved students' knowledge and attitudes towards mental health, leading to a greater likelihood of engaging in help-seeking behaviours (Kutcher et al., 2017).

Three studies in this review primarily focused on stigma reduction although the outcome of two other studies in this review also led to a reduction in stigma. Stigma surrounding mental health remains a significant barrier to help-seeking behaviours (Omondi, 2024). Evidence consistently show a negative correlation between mental health literacy and stigma, suggesting that enhancing literacy can lead to reduced stigma (Almeida et al., 2023; Lamichhane, 2023). So, the integration of anti-stigma components into mental health literacy programmes is crucial for addressing the multifaceted nature of stigma and its impact on help-seeking behaviours (Akpan & Ja'afar, 2025; Ibrahim et al., 2020).

Three studies in this review focused on emotional regulation and coping skills. Interventions that incorporate coping skills training alongside knowledge dissemination have demonstrated effectiveness in equipping young people with tools to manage their mental health (Hart et al., 2016).

Two studies in this review focused on depression identification and management. Studies have shown that educational programmes can significantly improve participants' ability to recognise symptoms of depression and understand the importance of seeking help (Ibrahim et al., 2020; McLuckie et al., 2014).

Three studies in this review focused on teacher and peer education. Educating teachers and peers is vital for creating supportive environments conducive to mental health literacy (Shephard & Garrison, 2023). Studies indicate that training educators to deliver mental health literacy content can lead to substantial improvements in both teacher and student knowledge and attitudes (Kutcher et al., 2015; McLuckie et al., 2014). Moreover, peer-led initiatives have proven effective in promoting mental health awareness and reducing stigma among young people, as peers often serve as trusted sources of information and support (Glazzard & Szreter, 2020; Simkiss et al., 2020). A systematic review by Parikh et al. (2018) found that peer-led interventions can be as effective

Table 7
Effectiveness of the mental health literacy interventions under four domains.

Studies	Improvement in Knowledge	Change in Attitude	Help-Seeking Behaviour	Stigma Reduction	Overall Effectiveness
Coetzee et al. (2024)	Yes	No	No	Yes	Effective in improving specific skills related to emotional regulation and self-esteem.
Kutcher et al. (2017)	Yes	Yes	Yes	No	Effective in improving knowledge and help-seeking behaviour.
Jibunoh and Ani, (2022)	Yes	No	No	No	Limited effectiveness due to high baseline anxiety levels.
Hamwaka (2015)	Yes	Yes	No	Yes	Effective in improving knowledge, relationships, and reducing stigma.
Kutcher et al. (2019)	Yes	Yes	Yes	Yes	Highly effective across multiple outcomes in both school and community settings.
Ndetei et al. (2022)	Yes	No	No	No	Effective in improving academic outcomes.
Oduguwa, Adedokun and Omigbodun, (2017)	Yes	Yes	No	Yes	Effective in improving knowledge and attitudes.
Im et al. (2018)	Yes	Yes	No	No	Effective in reducing PTSD symptoms and increasing mental health awareness.
Bella-Awusah et al. (2014)	Yes	No	No	No	Effective in improving knowledge but limited in changing attitudes or stigma.
Mutahi et al. (2024)	Yes	No	Yes	No	Effective in improving knowledge and increasing referrals.
Atilola et al. (2022)	Yes	Yes	No	Yes	Highly effective in improving knowledge, attitudes, and reducing stigma.

as professionally-led ones in addressing mental health problems in young people. However, ensuring the quality and consistency of peer-led programmes can be challenging (de Beer et al., 2024).

4.3. *Effectiveness of the interventions*

All the studies in this systematic review (n = 11) showed the effectiveness of various mental health literacy interventions in terms of improvement in knowledge and attitude, help-seeking behaviour or reduction of stigma associated with mental health among young people in sub-Saharan Africa. All the studies showed an improvement in knowledge aligning with a systematic review by Brijnath et al. (2016), which found that mental health literacy interventions generally improve knowledge. A study by Abd El Salam, AbdAllah and El Maghawry (2023) found that the improvement in knowledge towards mental health among young people after receiving mental health literacy intervention is primarily due to the effectiveness of tailored literacy programmes. These programmes are designed to address misconceptions, decrease stigma, and promote positive attitudes towards mental health. So, by engaging young people in mental health literacy interventions, their understanding of mental illnesses is enhanced, leading to increased awareness, improved beliefs, and a greater likelihood of seeking help when needed. However, a study by Milin et al. (2016) found that while interventions improved mental health knowledge, the effects diminished over time. This highlights the importance of ongoing reinforcement and support to maintain gains in mental health literacy.

Only six studies in this review showed a change in attitude as a result of the mental health literacy interventions. This indicates that improving knowledge or awareness of mental health does not necessarily mean that there will be a change in attitude. A study by Collison et al. (2023) revealed that the lack of significant change in attitude towards mental illness among young people after receiving a mental health literacy intervention could be attributed to the focus of the intervention on reducing self-stigmatizing mental health attitudes specifically. This suggests that interventions in this review may have been more effective in addressing internalised stigma rather than broader societal perceptions of mental health, highlighting the need for further research to enhance interventions targeting diverse attitudes towards mental illness among young people in sub-Saharan Africa. Although some interventions appeared to improve stigma-related attitudes, this does not necessarily mean that self-stigma was fully resolved or that young people were able to act on improved attitudes. Help-seeking is shaped not only by internal attitudes but also by anticipated public stigma, perceived service quality, availability of trusted adults, and realistic access to care. Thus, stigma reduction may be necessary but not sufficient for measurable increases in help-seeking behaviour. Also, a study by Mori et al. (2022) suggested that the lack of significant change in attitudes towards mental illness among young people after receiving mental health literacy intervention could be attributed to the complexity of altering societal stigmas and prejudices. While interventions effectively improved knowledge of mental illness in this review, attitudes are often deeply ingrained and may require more targeted and sustained interventions to shift. Additionally, attitudes towards mental health problems are influenced by various factors beyond education, such as cultural norms and personal experiences, which may not be easily modified in a short-term intervention (Talib et al., 2024).

In this review, there was low effectiveness of the evaluated interventions in improving help-seeking behaviour as only three studies in the review showed an improvement in help-seeking behaviours. This could be attributed to persistent self-stigma associated with seeking help. Despite receiving mental health literacy intervention, self-stigma may still act as a barrier to seeking help (Koutra et al., 2024). A study by Koutra, Pantelaiou and Mavroeides (2024) highlighted that while mental health literacy is positively linked to non-stigmatising attitudes towards mental illness, it is negatively associated with self-stigma of help-seeking. So, addressing self-stigma alongside improving mental health literacy is crucial in interventions to effectively support young individuals in seeking mental health assistance. The low frequency of observed help-seeking change may also reflect structural barriers rather than intervention failure alone. In settings with limited services, improved knowledge may not translate into immediate formal help-seeking if accessible options are scarce; similarly, short follow-up periods may be insufficient to detect behaviour change. Future studies should therefore assess both help-seeking intentions and actual help-seeking over longer follow-up periods. However, a systematic review by Ma, Anderson and Burn (2023) found that mental health literacy interventions did not show significant enhancements in various aspects of help-seeking outcomes, possibly due to the absence of standardised measures for assessing these outcomes and the limited consideration of the complex concepts of mental health literacy and stigma. Therefore, the need for standardised measurement tools during and after implementation of interventions is crucial to effectively understand and assess the help-seeking outcomes.

Five studies in this review showed a positive outcome in reducing stigmas associated with mental illness. The low effectiveness in stigma reduction observed in the majority of the studies included in this

systematic review underscores the need for more targeted efforts in this area. A meta-analysis by Griffiths et al. (2014) noted that stigma reduction requires interventions that target specific beliefs and also incorporate social contact with individuals who have mental illnesses. A meta-analysis by Mehta et al. (2015) found that while educational interventions can reduce mental health-related stigma, the effects are often small. Cultural adaptations are crucial for the success of mental health literacy interventions in reducing stigma related to mental health (Harte & Barry, 2024). Rathod et al. (2017) emphasise the importance of culturally-sensitive approaches that consider local beliefs and practices. The success of the African Guide curriculum by Kutcher et al. (2017) in reducing stigma may be attributed to its cultural relevance. So, future interventions should prioritise cultural adaptation to maximise their impact. Across the included studies, improvements were most consistent for knowledge outcomes, whereas changes in help-seeking behaviour were less common. Interventions that were multi-component, culturally adapted, and linked to existing delivery structures such as schools, peer networks, teachers, radio platforms, or community workers appeared more promising than brief stand-alone sessions. Future interventions should therefore prioritise implementation models that are scalable, contextually adapted, and connected to realistic referral or support pathways. Interventions that achieved change across more than one domain tended to be more than purely informational. They often incorporated repeated contact, culturally adapted content, peer or teacher involvement, or explicit stigma-related components, suggesting that broader attitudinal and behavioural outcomes may require more socially embedded and sustained approaches than knowledge transfer alone.

4.4. Strengths and limitations

The key strength of this systematic review is that it is the first to evaluate the effectiveness and nature of mental health literacy interventions for young people in sub-Saharan Africa and another strength is the diversity of interventions included in the reviewed studies. The interventions range from school-based curricula and peer education models to community-based programmes incorporating culturally relevant content. This variety of interventions has enabled this review to comprehensively evaluate different approaches to improving mental health literacy among young people across diverse settings in sub-Saharan Africa. However, there are several limitations. First, the research is not comprehensive enough to generalise the findings across all sub-Saharan countries, as the studies included only represent just a few countries within the region. Moreover, the inherent diversity of sub-Saharan Africa presents challenges, as interventions may not be uniformly applicable across countries with different cultural norms and healthcare systems. Although three major databases were searched, additional databases and grey literature sources were not included. This may have reduced the comprehensiveness of the review and may have contributed to the under-representation of evidence from some sub-Saharan African settings, including Francophone and Lusophone countries.

4.5. Implications for future research

Future research should prioritise rigorously designed trials, including cluster-randomised or well-controlled quasi-experimental studies, with longer follow-up periods to assess whether gains in knowledge are sustained and whether they translate into help-seeking behaviour. Researchers should use clearer and more consistent definitions of mental health literacy outcomes, incorporate validated measures of knowledge, attitudes, stigma, and help-seeking intentions or behaviour, and report implementation outcomes such as fidelity, acceptability, cost, workforce requirements, and scalability. More evidence is also needed from under-represented sub-Saharan African countries and from interventions adapted for out-of-school youth, community settings, and digitally supported or hybrid delivery models.

5. Conclusion

Improving mental health literacy among young people in sub-Saharan Africa is crucial for addressing the high burden of mental health problems. Effective interventions can enhance understanding, reduce stigma, and improve help-seeking behaviour, ultimately leading to better mental health outcomes. The findings in this systematic review have shown that mental health literacy interventions for young people can be implemented effectively in sub-Saharan African countries. There is evidence regarding the effectiveness of both school-based and community-based mental health literacy interventions in the region. While the interventions included in this review have shown positive outcomes by increasing their mental health literacy, the long-term effects and measures have not been documented. So, more research should be done to evidence the long-term effectiveness of these interventions in improving the mental health of young people in sub-Saharan Africa through mental health literacy.

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Data availability

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Usoro Akpan: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Conceptualization. **Helena Tuomainen:** Writing – review & editing. **Archibong Bassey:** Methodology.

Declaration of competing interest

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