

Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P) Checklist¹ for: *Digital mental health interventions for adolescents and young people (10–24 years) in Africa: A protocol for a systematic review of mental health outcomes, engagement, and equity considerations*

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Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
ADMINISTRATIVE INFORMATION					
Title					
Identification	1a	Identify the report as a protocol of a systematic review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1 – 3
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	<input type="checkbox"/>	<input type="checkbox"/>	NA
Registration	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51
Authors					
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	<input checked="" type="checkbox"/>	<input type="checkbox"/>	52 – 66
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	67 – 76
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	77 – 81
Support					
Sources	5a	Indicate sources of financial or other support for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	82 – 95
Sponsor	5b	Provide name for the review funder and/or sponsor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	96 – 98
Role of sponsor/funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	<input checked="" type="checkbox"/>	<input type="checkbox"/>	99 – 103
INTRODUCTION					
Rationale	6	Describe the rationale for the review in the context of what is already known	<input checked="" type="checkbox"/>	<input type="checkbox"/>	105 – 170
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	171 – 179
METHODS					
Eligibility criteria	8	Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	181 – 209
Information sources	9	Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	210 – 243
Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	<input checked="" type="checkbox"/>	<input type="checkbox"/>	244 – 285
STUDY RECORDS					

Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	287 – 296
Selection process	11b	State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	297 – 306
Data collection process	11c	Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	307 – 316
Data items	12	List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>	317 – 339
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	340 – 354
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	355 – 366
DATA					
Synthesis	15a	Describe criteria under which study data will be quantitatively synthesized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	368 – 378
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., I^2 , Kendall's tau)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	379 – 385
	15c	Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	386 – 397
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	398 – 404
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	405 – 413
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (e.g., GRADE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	414 – 444

APPENDIX 1: FULL SEARCH STRATEGY FOR PUBMED:

("digital mental health interventions" OR "digital health" OR "digital health interventions" OR "mHealth" OR "eHealth" OR "telehealth" OR "telemedicine" OR "online support groups" OR "SMS" OR "text-based interventions" OR "mobile app-based interventions" OR "computerized cognitive behavioral therapy" OR "CCBT" OR "serious games" OR "therapeutic games" OR "virtual reality" OR "augmented reality" OR "artificial intelligence" OR "AI-powered tools" OR "chatbots" OR "predictive tools" OR "ecological momentary assessment" OR "ecological momentary intervention") AND ("mental health" OR "psychosocial support" OR "psychological well-being" OR "depression" OR "anxiety" OR "PTSD" OR "stress" OR "emotional well-being" OR "suicidal ideation" OR "self-harm" OR "behavioral health" OR "mental disorders" OR "prevention of mental health problems" OR "preventive mental health interventions" OR "mental health promotion" OR "early intervention in mental health") AND ("adolescents" OR "young people" OR "youth" OR "teenagers" OR "young adults" OR "adolescent health" OR "ages 10-24" OR "secondary school students" OR "university students") AND ("Africa" OR "Algeria" OR "Angola" OR "Benin" OR "Botswana" OR "Burkina Faso" OR "Burundi" OR "Cabo Verde" OR "Cameroon" OR "Central African Republic" OR "Chad" OR "Comoros" OR "Congo" OR "Côte d'Ivoire" OR "Djibouti" OR "Egypt" OR "Equatorial Guinea" OR "Eritrea" OR "Eswatini" OR "Ethiopia" OR "Gabon" OR "Gambia" OR "Ghana" OR "Guinea" OR "Guinea-Bissau" OR "Kenya" OR "Lesotho" OR "Liberia" OR "Libya" OR "Madagascar" OR "Malawi" OR "Mali" OR "Mauritania" OR "Mauritius" OR "Morocco" OR "Mozambique" OR "Namibia" OR "Niger" OR "Nigeria" OR "Rwanda" OR "São Tomé and Príncipe" OR "Senegal" OR "Seychelles" OR "Sierra Leone" OR "Somalia" OR "South Africa" OR "South Sudan" OR "Sudan" OR "Tanzania" OR "Togo" OR "Tunisia" OR "Uganda" OR "Zambia" OR "Zimbabwe") AND ("feasibility" OR "acceptability" OR "implementation viability" OR "effectiveness" OR "mental health improvement" OR "symptom reduction" OR "behavioral improvements" OR "user satisfaction" OR "engagement" OR "adherence" OR "equity" OR "barriers" OR "scalability" OR "impact assessment") AND ("randomized controlled trial" OR "RCT" OR "pilot trial" OR "quasi-experimental study" OR "observational study" OR "longitudinal study" OR "case-control study" OR "naturalistic study" OR "cross-sectional study" OR "survey" OR "mixed-methods study" OR "cohort study") NOT ("protocol" OR "editorial" OR "opinion piece" OR "case study" OR "narrative review" OR "literature review" OR "secondary data" OR "scoping review") AND ("2015/01/01"[PDat] : "2025/04/03"[PDat])

PsyberGuide:

A descriptive review will be conducted of all apps listed on PsyberGuide as of April 2025. These apps will be cross-referenced with peer-reviewed literature using PubMed, Scopus, Web of Science, and Google Scholar to identify evaluation studies. Only apps meeting the review's inclusion criteria will be retained. Specifically, apps must support a digital mental health intervention centrally delivered via digital means (e.g., mobile

app, SMS, teletherapy) and must target adolescents or young people aged 10 to 24 living in Africa. Interventions delivered solely in-person, without a central digital component, or apps not evaluated in eligible study designs (e.g., RCTs, cohort, observational) will be excluded. Apps with only secondary analyses, narrative reviews, or protocols as supporting evidence will also be excluded.

REFERENCES

1. Moher D, Shamseer L, Clarke M, Ghersi D, Liberati A, Petticrew M, Shekelle P, Stewart LA; PRISMA-P Group. (2015). *Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement*. *Systematic Reviews*, 4(1), 1. <https://doi.org/10.1186/2046-4053-4-1>