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Effectiveness of School-Based Mental Health Interventions for Secondary School Students: A Systematic Review

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Abstract

Adolescent mental health difficulties remain a significant educational and public health concern, particularly in contexts where specialist services are limited or unevenly accessible. Schools are frequently positioned as practical sites for mental health promotion, prevention and early intervention because they offer routine access to adolescents and can embed support within existing educational structures. This systematic review synthesised ten peer-reviewed studies on school-based mental health interventions for secondary-school-aged students. Guided by PRISMA 2020 reporting principles, searches were conducted across Google Scholar, PubMed and ERIC, supported by forward citation searching. Data were extracted on study context, intervention type, target population, outcomes and limitations, and included studies were appraised using CASP-informed quality criteria. The review found that school-based interventions generally report positive effects on adolescent mental health and wellbeing, including reductions in anxiety, stress and depressive symptoms and improvements in mental health literacy, coping self-efficacy and resilience-related outcomes. However, the strength and durability of effects varied across intervention types, outcome measures and implementation contexts. The synthesis indicates that effectiveness is not a property of intervention content alone; it is shaped by theoretical alignment, implementation quality, teacher capacity, cultural fit, programme duration and available referral pathways. The review concludes that school-based mental health interventions are promising but should not be treated as universally effective without attention to context, fidelity and evaluation design. The findings are relevant for schools and policymakers in low- and middle-income countries, including Guyana, where school-based approaches may expand access to early mental health support while strengthening links between education and public health systems.

Keywords

School Counseling, Mental Health, Adolescents, Systematic Review, School-Based Interventions

1. Introduction

Mental health challenges among adolescents have become a significant global public health concern. The World Health Organization (WHO, 2021) estimates that one in seven adolescents aged 10-19 years experiences a mental health disorder, while earlier global evidence indicates that between 10% and 20% of children and adolescents experience mental health difficulties (Kieling et al., 2011). These concerns are not limited to clinical health systems. They affect schooling, relationships, behaviour, participation, identity formation and long-term life opportunities.

The consequences of untreated adolescent mental health difficulties are substantial. Anxiety, depression, stress and behavioural difficulties can affect attendance, academic engagement, peer relationships and the capacity to participate meaningfully in school life. Racine et al. (2021) further showed that the COVID-19 period intensified youth mental health concerns, with clinically elevated depression and anxiety symptoms increasing globally. This reinforces the need for accessible, developmentally appropriate and preventive forms of support.

Schools are increasingly recognised as strategic settings for adolescent mental health support because they reach young people before difficulties become entrenched and before help-seeking barriers become severe. Durlak et al. (2011) demonstrated the value of school-based social and emotional learning, while Fazel et al. (2014) argued that schools are uniquely placed to address mental health needs through universal, selective and targeted forms of support. Werner-Seidler et al. (2017) similarly noted that school settings provide practical opportunities for depression and anxiety prevention programmes.

The school context is particularly important where access to external mental health services is constrained. Weist et al. (2017) identified persistent challenges associated with families connecting to specialist services, sustaining attendance at appointments and accessing coordinated school-community support. In such contexts, school-based interventions may reduce stigma, increase early identification and provide a bridge between education, families and health services.

The issue is especially relevant for Guyana. Historical, social and structural factors have shaped mental health vulnerability, service access and public perceptions of mental illness. Halley and Cowden (2023) connect Guyana's mental health landscape to colonial and postcolonial legacies, while Shaw et al. (2022) highlight the country's long-standing concern with suicide and suicidal behaviour. More recent national planning documents indicate continuing concern with stigma, access and service coordination (Ministry of Health-

Guyana, 2024). Against this background, schools may provide an important setting for early, low-stigma and community-connected mental health support.

However, the effectiveness of school-based mental health interventions remains difficult to interpret. The literature includes diverse intervention types, populations, outcome measures, durations and implementation models. Das et al. (2016) noted that evidence is complicated by variation in study populations, delivery agents, theoretical foundations and process evaluation. Werner-Seidler et al. (2017) similarly found variability in study quality and highlighted the need for clearer evidence on lasting effects. These issues make it insufficient simply to ask whether school-based interventions work. A more useful question is what appears to work, for whom, under what conditions and with what limitations.

This systematic review therefore synthesises evidence on school-based mental health interventions for secondary-school-aged students, with particular attention to intervention types, reported outcomes, implementation factors and gaps in the evidence base. The review is guided by the following research questions:

- What is the overall effectiveness of school-based mental health interventions in improving adolescent mental health outcomes?
- What types of school-based mental health interventions are commonly implemented across different contexts?
- To what extent do these interventions improve specific outcomes such as anxiety, stress and depression among adolescents?
- What contextual and implementation factors influence the effectiveness of these interventions?
- What are the key limitations and gaps in the existing literature on school-based mental health interventions?

2. Literature Review and Conceptual Framing

2.1. Schools as Ecological Settings for Mental Health Support

School-based mental health interventions are best understood through an ecological lens. Adolescents do not experience mental health difficulties in isolation; their wellbeing is shaped by relationships with peers, teachers, family members, community norms, school culture and wider social conditions. Within this perspective, schools are not simply delivery sites for externally designed programmes. They are developmental environments in which risk and protective factors are produced, reinforced or reduced.

This ecological understanding explains why interventions that rely only on information delivery are unlikely to be sufficient. García-Carrión et al. (2019) emphasised the role of interaction-based approaches involving students, teachers, families and peers. Such approaches suggest that mental health support is strengthened when embedded in daily relationships and routines rather than treated as a one-off intervention. The relevance of this insight is high for

secondary schools, where peer belonging, teacher-student relationships and school connectedness can influence help-seeking and emotional adjustment.

The ecological perspective also helps explain why implementation context matters. A programme that is effective in one setting may not reproduce the same effect in another if the receiving school lacks trained staff, administrative support, referral pathways, cultural relevance or sufficient time for delivery. This is particularly important for low- and middle-income countries, where externally developed interventions may require adaptation before they can operate effectively within local school systems (Grande et al., 2023; Gimba et al., 2020).

2.2. The Prevention Continuum

A second conceptual anchor is the prevention continuum. School-based mental health interventions can be positioned as universal, selective or indicated approaches. Universal interventions are delivered to all students regardless of risk status. Selective interventions target groups considered at higher risk, while indicated interventions focus on students already showing early signs of mental health difficulty. Gimba et al. (2020) used this continuum to describe school mental health programmes in low- and middle-income countries, identifying programme modules such as psychoeducation, communication, behavioural skills, cognitive skills, social networks and help-seeking activities.

The distinction between universal and targeted approaches is analytically important. Universal programmes may reduce stigma, reach large populations and strengthen whole-school culture. However, because they are delivered to broad populations, effect sizes may be modest. Targeted or indicated programmes may produce stronger effects for students with elevated symptoms, but they require screening, referral capacity and careful safeguarding to avoid labelling or exclusion. The review therefore treats intervention level as a key explanatory factor rather than as a simple descriptive category.

2.3. Intervention Types and Outcomes

The literature identifies several forms of school-based intervention. Mental health literacy programmes aim to improve knowledge, reduce stigma and strengthen help-seeking. Nobre et al. (2021) found that such programmes can improve adolescents' awareness of mental health, although behavioural outcome evidence remains more limited. Interactive and group-based interventions emphasise peer discussion, guided practice, cooperative tasks and supportive relationships (García-Carrión et al., 2019). Multi-component programmes may combine counselling, psychoeducation, skills training, awareness activities and referral support (Gimba et al., 2020).

Meta-analytic evidence generally supports the potential of school-based programmes, but it also shows that findings are not uniform. Feiss et al. (2019) found reductions in stress, anxiety and depression across school-based prevention programmes, while Caldwell et al. (2019) found limited evidence for

some educational-setting interventions focused solely on prevention of anxiety or depression. Grande et al. (2023), focusing on low- and middle-income countries, found that school-based interventions were generally superior to comparators overall, but effect estimates varied by disorder, intervention type and evidence quality. Berger et al. (2022) similarly found some long-term benefits in Australian school wellbeing programmes, while emphasising variability and the difficulty of comparing programmes with heterogeneous outcomes.

These findings suggest that school-based interventions should not be evaluated only by whether they produce positive change. They must also be assessed according to the outcome being measured, the student population, the theoretical basis of the programme, the quality of implementation and the durability of effects. A short-term increase in knowledge, for example, is not equivalent to sustained reductions in depressive symptoms or improved access to care.

2.4. Implementation Capacity and Cultural Fit

Implementation quality is a central determinant of effectiveness. Richter et al. (2022) identified programme complexity, adaptability, cost, organisational culture and implementation capacity as important factors in school mental health service implementation. This means that a theoretically sound intervention may still underperform if it is delivered without adequate training, leadership support, fidelity monitoring or integration into school routines.

Teacher capacity is especially important. Imran et al. (2022) found that training teachers in a WHO-EMRO school mental health programme improved teacher mental health literacy, self-efficacy and confidence, although student outcome changes were less conclusive. This distinction is important: teacher training may be a necessary enabling condition for school mental health support, but it should not be assumed to produce direct student-level mental health improvements unless such outcomes are measured and sustained.

Cultural fit is also a recurring concern. Interventions developed in high-income countries may not transfer directly into low-resource school systems or culturally different communities. Grande et al. (2023) emphasised the scarcity of LMIC-specific treatment evidence, while Gimba et al. (2020) noted that many programmes in LMICs are adapted from high-income contexts. The implication is not that international interventions should be rejected, but that adaptation, feasibility testing and stakeholder engagement are necessary for credible implementation.

2.5. Summary of the Literature Gap

The literature therefore supports school-based mental health interventions as promising, but not uniformly effective. The key gap is not the absence of positive evidence; it is the lack of sufficiently integrated evidence about why effectiveness varies across intervention level, programme design,

implementation quality and context. This review responds to that gap by synthesising ten studies through a thematic and cross-study lens rather than treating each source as an isolated finding.

3. Materials and Methods

3.1. Research Design

This study adopted a systematic review design to identify, appraise and synthesise peer-reviewed evidence on school-based mental health interventions for adolescents. The review was guided by PRISMA 2020 reporting principles (Page et al., 2021). Given the heterogeneity of included study designs, interventions and outcome measures, the synthesis was conducted narratively and thematically rather than through a new meta-analysis.

3.2. Search Strategy

Electronic searches were conducted in Google Scholar, PubMed and ERIC. These databases were selected to capture literature across education, public health, psychology and school-based intervention research. The core search string was:

("school-based mental health" OR "school counselling" OR "mental health intervention" OR "school mental health programme" OR "school mental health program") AND (adolescent OR "secondary school" OR youth OR teenager) AND (effectiveness OR "intervention outcomes" OR "mental health outcomes" OR prevention OR promotion)

Searches focused on peer-reviewed literature published between 2015 and 2025. Forward citation searching was also used to identify highly relevant studies that directly addressed the review questions. Where sources were used only for background or contextual framing, they were not treated as included studies unless they met all inclusion criteria and were entered into the extraction table.

3.3. Inclusion and Exclusion Criteria

Studies were included if they: (a) focused on school-based mental health promotion, prevention or intervention; (b) involved children or adolescents, with relevance to secondary-school-aged learners; (c) reported empirical findings or synthesised empirical evidence; (d) were peer reviewed; and (e) were available in English and accessible in full text. Systematic reviews, scoping reviews, meta-analyses and intervention studies were eligible because the purpose was to synthesise both effectiveness evidence and implementation evidence.

Studies were excluded if they focused primarily on university students or adults, were not school-based, were opinion-based without empirical grounding, lacked clear relevance to adolescent mental health outcomes, or did not provide sufficient methodological detail to support extraction. Studies used only to

establish broad contextual background were not counted among the included studies.

3.4. Screening and Quality Appraisal

Titles and abstracts were screened against the inclusion criteria, followed by full-text review of potentially eligible studies. Data extraction captured author, year, context, study type, intervention type, target group, key findings and limitations. Included studies were appraised using CASP-informed criteria appropriate to the study design, including clarity of the research question, suitability of method, transparency of selection procedures, appropriateness of analysis, validity of findings and relevance to the review questions. The appraisal was used to support interpretation rather than to generate a pooled score.

This review was conducted by a single researcher. The absence of a second independent screener or formal inter-rater reliability procedure is a limitation because it may increase the risk of selection bias. To reduce this risk, the review used explicit inclusion and exclusion criteria, a documented search string, structured extraction and transparent reporting of included studies.

4. Study Selection Process

The database search yielded 165 records. After duplicates were removed, 140 records remained for title and abstract screening. Of these, 120 were excluded because they were not focused on school-based mental health interventions, did not involve adolescent or school-aged populations, were not peer reviewed, or did not align with the review questions. Twenty full-text articles were assessed for eligibility.

Following full-text review, ten studies were excluded because of insufficient alignment with the inclusion criteria, limited methodological relevance or inadequate focus on school-based adolescent mental health intervention. A final sample of ten studies was retained for extraction and synthesis. Figure 1 summarises the study selection process.

Figure 1

PRISMA Flow Diagram of Study Selection Process

Stage	Selection Decision	Number
Identification	Records identified through database searching	n = 165
Screening	Records after duplicates removed	n = 140
Screening	Records excluded after title and abstract screening	n = 120
Eligibility	Full-text articles assessed for eligibility	n = 20
Eligibility	Full-text articles excluded	n = 10
Included	Studies included in qualitative synthesis	n = 10

5. Data Extraction and Quality Appraisal

Data were extracted using a structured table to enable comparison across studies. The final sample included systematic reviews, meta-analyses, scoping reviews and intervention studies. This range of designs allowed the review to examine both outcome effectiveness and implementation conditions.

Table 1

Summary of Included Studies

Author(s) and Year	Context	Study Type	Intervention Type	Target Group	Key Findings	Key Limitations
Feiss et al. (2019)	Global	Systematic review and meta-analysis	School-based stress, anxiety and depression prevention programmes	Adolescents	Reported reductions in stress, anxiety and depression across included school-based programmes.	Effects varied across studies and outcome measures.
García-Carrión et al. (2019)	International	Systematic review	Interaction-based school and community interventions	Children and adolescents	Identified positive social and emotional outcomes linked to dialogic and interaction-based approaches.	Limited long-term outcome evidence.
Nobre et al. (2021)	Global	Scoping review	Mental health literacy programmes	Adolescents	Mapped school-based mental health literacy programmes and reported improvements in knowledge and awareness.	Behavioural and clinical outcome evidence remained limited.
Gimba et al. (2020)	LMICs	Systematic literature review	Multi-component school mental health programmes	Students	Identified modules including counselling, psychoeducation, behavioural skills, cognitive skills, social	Resource constraints and adaptation issues affected implementation.

					networks and help seeking.	
Richter et al. (2022)	Global	Scoping review	School mental health service implementation	Students and school systems	Found that implementation quality, adaptability, organisational culture and capacity influence outcomes.	Implementation barriers complicate interpretation of effectiveness.
Grande et al. (2023)	LMICs	Systematic review and meta-analysis	School-based interventions for mental health problems	Children and adolescents	Found overall positive effects, though results differed by disorder and intervention type.	Limited high-quality LMIC evidence and variation in outcomes.
Berger et al. (2022)	Australia	Systematic review	School mental health and wellbeing programmes	Students	Identified some programmes with long-term positive impacts on physical and psychological health and wellbeing.	Heterogeneous programmes and outcomes limited direct comparison.
Caldwell et al. (2019)	Global	Systematic review and network meta-analysis	School-based anxiety and depression prevention interventions	Children and young people	Found limited and variable evidence for education-setting interventions focused solely on preventing anxiety and depression.	Heterogeneity and intervention diversity limited certainty.
Imran et al. (2022)	Pakistan	Randomised controlled trial	Teacher mental health training intervention	Teachers and students	Improved teacher mental health literacy, self-efficacy and confidence; student effects were not statistically conclusive.	Individual randomisation, possible contamination and limited student outcome power.
Tran et al. (2023)	Vietnam	Two-arm parallel controlled trial	Universal school-based mental health promotion programme	Adolescents	Reported short-term improvements in depressive symptoms, wellbeing and coping	Durability and generalisability require further testing.

	self-efficacy, with some effects not sustained at six months.

This information was organized into a data extraction table to facilitate comparison across studies and to support the identification of patterns and trends within the data. The structured approach ensured consistency in how information was captured and analyzed across all included studies.

Table 2

CASP-Informed Quality Appraisal Summary

Evidence Group	Appraisal Summary	Main Interpretive Caution
Systematic reviews and meta-analyses	Generally moderate to high methodological confidence where search, selection and synthesis procedures were explicit.	Heterogeneity across included interventions and outcomes limited direct comparability.
Scoping reviews	Useful for mapping intervention types, implementation factors and evidence gaps.	Less suited to determining effect strength because scoping reviews do not usually pool outcomes.
Intervention studies	Provided context-specific evidence on feasibility and outcomes in school settings.	Some had limited follow-up, possible contamination, weak power for student outcomes or limited generalisability.
Overall evidence base	Supports cautious confidence that school-based interventions can improve some mental health and wellbeing outcomes.	Effectiveness depends heavily on intervention design, population, implementation quality, cultural fit and outcome measurement.

6. Data Analysis

The extracted evidence was analysed thematically. Studies were first grouped according to intervention type, including mental health literacy, prevention-focused programmes, interaction-based approaches, teacher training, multi-component programmes and universal wellbeing programmes. They were then compared across four analytical categories: reported effectiveness, intervention level, implementation conditions and evidence limitations.

The analysis deliberately moved beyond a study-by-study summary. Cross-study comparison was used to examine where findings converged, where they diverged and what contextual or methodological factors appeared to explain variation. This approach was appropriate because the included studies differed substantially in design, outcomes and populations, making statistical pooling inappropriate for the present review.

7. Results

7.1. Overview of Included Studies

The ten included studies covered a range of geographic and methodological contexts. The sample included global reviews, LMIC-focused reviews, Australia-specific synthesis and intervention studies from Pakistan and Vietnam. The evidence base was therefore broad enough to identify cross-study patterns, but too heterogeneous to support claims of uniform effectiveness across all school-based interventions.

7.2. Types of School-Based Mental Health Interventions

The review identified four broad intervention types. First, mental health literacy interventions sought to improve knowledge, reduce stigma and support help-seeking. Second, prevention-oriented programmes targeted anxiety, depression, stress or general emotional wellbeing. Third, multi-component programmes combined counselling, psychoeducation, cognitive and behavioural skills, social support and referral-related elements. Fourth, implementation-focused interventions strengthened teacher capacity, school culture or delivery systems rather than directly treating student symptoms.

This diversity is important because it explains why effectiveness cannot be interpreted through a single outcome. A literacy programme may be successful if it improves recognition and help-seeking, while a treatment-oriented intervention must be assessed against symptom reduction. A teacher training intervention may improve staff capacity without immediately producing measurable student-level clinical change. The review therefore found that intervention purpose and outcome selection must be aligned before effectiveness can be judged.

7.3. Evidence of Effectiveness

Across the included studies, school-based interventions generally showed positive potential, but the evidence was uneven. Feiss et al. (2019) reported reductions in stress, anxiety and depression, and Grande et al. (2023) found that school-based interventions in LMICs were generally superior to comparators overall. Berger et al. (2022) identified programmes with long-term positive impacts in Australia, and Tran et al. (2023) found short-term improvements in depressive symptoms, psychological wellbeing and coping self-efficacy in Vietnam.

At the same time, the evidence does not support the claim that school-based interventions are uniformly or strongly effective. Caldwell et al. (2019) found limited evidence for some educational-setting interventions focused solely on preventing anxiety and depression. Grande et al. (2023) found that effects differed across mental health conditions, with more robust findings for some outcomes than others. Imran et al. (2022) showed clear improvements in teacher mental health literacy and self-efficacy, but student emotional and behavioural outcomes did not show statistically significant improvement at three months. These differences point to effectiveness as conditional rather than automatic.

7.4. Factors Influencing Effectiveness

Implementation quality emerged as a central explanatory factor. Studies that addressed programme structure, training, school readiness and feasibility were better positioned to explain why interventions produced certain outcomes. Richter et al. (2022) emphasised complexity, adaptability, cost and organisational culture as implementation determinants. Gimba et al. (2020) showed that programmes in LMICs often depend on the availability of trained personnel, contextual adaptation and feasible delivery modules.

Teacher capacity was also a recurring factor. Imran et al. (2022) demonstrated that teacher training can improve mental health literacy and confidence, suggesting that teachers may function as important first-line supports. However, teacher capacity should be interpreted as an enabling mechanism rather than a guaranteed student outcome. Without referral pathways, supervision, follow-up and integration into school routines, training alone may not generate sustained mental health improvements for students.

Cultural and contextual fit further influenced interpretation. Grande et al. (2023) and Gimba et al. (2020) both indicate that LMIC school settings face distinctive constraints, including resource limitations, workforce gaps and dependence on adapted programmes. Tran et al. (2023) provides a useful example of a culturally adapted school-based programme in Vietnam, but the mixed durability of outcomes suggests that adaptation and initial effectiveness must still be followed by longer-term evaluation.

7.5. Thematic Summary

Table 3

Cross-Study Thematic Synthesis

Theme	Cross-Study Finding	Interpretation
Intervention diversity	Schools use mental health literacy, universal prevention, targeted support, teacher training and multi-component approaches.	The intervention type must be matched to the intended outcome before effectiveness can be judged.
Conditional effectiveness	Most studies report some positive outcomes, but effect size, durability and outcome type vary.	The evidence supports cautious optimism rather than universal claims of effectiveness.
Universal versus targeted approaches	Universal programmes can reach large populations and reduce stigma but may produce modest effects; targeted programmes may be stronger for symptomatic students but require screening and referral capacity.	Schools need tiered models rather than reliance on one programme type.
Implementation dependence	Training, fidelity, leadership support, resources and cultural fit shape outcomes.	Poor implementation can make an effective theory appear ineffective.
Evidence limitations	The evidence base is heterogeneous, with limited long-term data and uneven LMIC evidence.	Future research needs stronger designs, longer follow-up and clearer outcome measurement.

8. Discussion

8.1. What the Evidence Shows

The central finding of this review is that school-based mental health interventions are promising, but their effectiveness is conditional. The strongest evidence is not that any school-based programme will improve adolescent mental health. Rather, the evidence suggests that benefits are more likely when intervention purpose, theoretical design, delivery capacity and outcome measurement are aligned. This interpretation is important because it prevents the review from reducing a complex intervention field to a simple positive or negative judgement.

The included studies converge on the view that schools can function as accessible sites for prevention, promotion and early support. However, they diverge in relation to the magnitude and durability of effects. Feiss et al. (2019), Grande et al. (2023), Berger et al. (2022) and Tran et al. (2023) provide evidence

of positive outcomes, while Caldwell et al. (2019) and Imran et al. (2022) show that effects can be limited, indirect or outcome-specific. The most defensible conclusion is therefore that school-based mental health interventions can be effective under appropriate conditions, but effectiveness cannot be assumed without attention to context and evaluation quality.

8.2. Universal and Targeted Interventions Should Not Be Treated as Competitors

A key analytical distinction concerns universal and targeted approaches. Universal programmes have an important public health logic: they normalise mental health discussion, avoid singling out students and reach large populations. This is especially valuable where stigma is high or specialist access is limited. However, universal delivery often produces smaller average effects because many students may not have elevated symptoms at baseline. The modest or variable effects reported across some prevention studies should therefore not be interpreted only as programme weakness; they may also reflect the population-level design of universal prevention.

Targeted or indicated interventions, by contrast, may produce stronger effects for students with identified needs, but they depend on accurate screening, referral systems, trained personnel and ethical safeguards. In contexts such as Guyana, where specialist services may be limited, a purely targeted model could identify needs that schools are not equipped to address. The practical implication is that schools require a tiered model: universal mental health literacy and wellbeing promotion for all students, selective support for vulnerable groups, and referral-linked targeted interventions for students with more significant needs.

8.3. Implementation Explains Much of the Variation in Outcomes

The evidence also suggests that variation in outcomes is partly an implementation problem. Richter et al. (2022) shows that programme complexity, adaptability and organisational capacity are central to school mental health implementation. This explains why two interventions with similar theoretical content may produce different outcomes across schools. A programme delivered by trained staff with leadership support, sufficient time and clear referral routes is not equivalent to the same programme delivered as an isolated activity with minimal preparation.

Teacher capacity is a particularly important implementation mechanism. Imran et al. (2022) indicates that teacher training can improve mental health literacy and self-efficacy, but the absence of statistically significant student outcome effects warns against overstating what teacher training alone can accomplish. Teachers can identify concerns, reduce stigma and support classroom climates, but they cannot substitute for specialist care when clinical needs are significant. School-based mental health systems therefore need clear boundaries between teacher support, counselling roles and external referral.

8.4. Relevance for Low- and Middle-Income Countries and Guyana

For LMIC contexts, the review suggests both opportunity and caution. Schools may provide one of the most feasible routes for expanding early mental health support, especially where specialist services are scarce. However, importing programmes developed in high-income contexts without adaptation risks weak implementation and poor fit. Grande et al. (2023) and Gimba et al. (2020) show that LMIC evidence remains limited and context-sensitive. Tran et al. (2023) illustrates the value of adaptation, but also shows that short-term gains may not be sustained without reinforcement.

For Guyana, the implication is not that schools should independently take responsibility for adolescent mental health care. Rather, schools should be positioned as part of a wider mental health ecology that includes families, counsellors, health services, community organisations and national policy. A feasible model would begin with universal mental health literacy, teacher sensitisation, anti-stigma work and clear referral protocols, followed by targeted support for students at higher risk. Such a model would need careful safeguarding, cultural adaptation and evaluation before scaling.

8.5. Implications for Policy and Practice

The findings point to several practical implications. First, schools should avoid adopting programmes simply because they are labelled evidence-based. Evidence should be checked against the intended student group, outcome, delivery conditions and implementation requirements. Second, teacher training should be included, but it should be connected to counselling support and referral systems. Third, universal programmes should be used to build awareness and reduce stigma, while targeted interventions should be reserved for students whose needs require more focused support. Fourth, programmes should include follow-up measures because short-term improvements may not indicate durable change.

Policy should therefore support school-based mental health as a coordinated system rather than a single programme. This includes training, referral protocols, monitoring, family engagement, culturally appropriate materials and outcome evaluation. In resource-constrained settings, starting small with feasible, well-supported interventions may be more effective than launching broad programmes without implementation infrastructure.

8.6. Limitations of the Review

This review has limitations. It was conducted by a single researcher, so study selection and appraisal were not independently verified by a second reviewer. The included studies were heterogeneous in design, population, intervention type and outcome measurement, limiting direct comparison. The review also included reviews and primary intervention studies, which creates a mixed evidence base. While this was appropriate for examining both effectiveness and

implementation, it limits the ability to make precise claims about effect size. Finally, the review focused on English-language, full-text, peer-reviewed studies and may therefore have excluded relevant evidence published in other languages or grey literature.

8.7. Directions for Future Research

Future research should prioritise longer-term follow-up, clearer reporting of implementation fidelity, stronger LMIC-based intervention studies and more consistent outcome measures. Studies should distinguish between knowledge gains, help-seeking, wellbeing, clinical symptoms and school functioning. Research in Guyana and comparable Caribbean contexts would be especially valuable because the current evidence base does not provide sufficient context-specific guidance for implementation in small states with distinctive social, cultural and service-system conditions.

9. Conclusion

This systematic review found that school-based mental health interventions can contribute positively to adolescent mental health and wellbeing, but their effectiveness is conditional rather than automatic. The included studies indicate benefits across mental health literacy, anxiety, stress, depressive symptoms, coping self-efficacy and general wellbeing, yet they also show variation in effect strength, durability and implementation feasibility. The evidence therefore supports cautious, context-sensitive use of school-based interventions rather than broad claims that all such programmes are effective.

The review's main contribution is to show that effectiveness depends on the relationship between intervention design, implementation quality and school context. Universal programmes may be valuable for awareness, stigma reduction and population-level prevention, while targeted approaches may be necessary for students with elevated needs. Teacher training is important, but it must be supported by referral pathways, counselling capacity and clear role boundaries. For Guyana and similar contexts, school-based mental health interventions should be developed as part of a coordinated education-health response, with careful adaptation, monitoring and evaluation. When implemented with these conditions in place, schools can become important sites for early support, prevention and the promotion of adolescent wellbeing.

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Conflict of Interest

The author declare no conflict of interest.

Use of Artificial Intelligence (AI) Statements

The author declares the use artificial intelligence (AI) tools (Perplexity, and chat GPT) to support aspects of this research, including summarizing articles, language editing, structuring of content, and refinement of academic expression, and citation alignment. Where AI tools contributed to the organisation and presentation of ideas, all outputs were critically reviewed, verified, and revised by the author. No AI tools were used to generate original data or conduct independent analysis. The author takes full responsibility for the accuracy, integrity, and interpretation of the work.

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