

SCHOOL-BASED MENTAL HEALTH INTERVENTIONS FOR CHILDREN AND ADOLESCENTS IN SOUTH ASIA: A REVIEW OF RANDOMISED EVIDENCE AND IMPLICATIONS FOR PAKISTAN

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ABSTRACT

This review aimed to describe randomised evidence on school-based mental health interventions for children and adolescents in South Asia, examine the approaches used to deliver these interventions, and identify implications and research priorities for Pakistan. A narrative review was undertaken using published trial reports, trial registries, and reference lists of relevant reviews. Randomised and cluster-randomised studies conducted in schools in the eight South Asian countries represented by the SAARC region were considered. Eligible interventions included psychological, psychosocial, whole-school health promotion, and physical activity programmes that reported a mental health or psychosocial outcome. Effectiveness trials and feasibility studies were considered separately. Six effectiveness trials and two feasibility studies were identified from Pakistan, India, Bangladesh, Nepal, and Sri Lanka. Most interventions were delivered by trained non-specialists, lay counsellors, or paraprofessionals rather than specialist psychologists. In Pakistan, a cluster-randomised trial of the WHO-developed EASE intervention among 566 adolescents with elevated psychosocial distress reported a reduction in distress at three months, with an effect size of 0.38 (95% CI 0.18–0.57). In India, the PRIDE intervention produced an effect size of 0.36 (95% CI 0.11–0.61) for self-identified problems at six weeks, while 12-month follow-up showed improvement in some outcomes. The SEHER whole-school intervention in India improved school climate and reduced several adverse outcomes when delivered by lay counsellors, whereas the teacher-delivered arm did not demonstrate effects. A physical activity intervention in Bangladesh was associated with lower depressive symptoms ($\beta = -4.60$, 95% CI -5.76 to -3.46) and higher life satisfaction ($\beta = 1.43$, 95% CI 0.77 – 2.10). Evidence from conflict-affected Nepal and Sri Lanka was more mixed. School-based interventions delivered by trained non-specialists appear feasible in South Asia and may provide short-term benefits, particularly among students experiencing psychological distress. However, the evidence base remains geographically limited, long-term follow-up is uncommon, and important implementation and cost-effectiveness questions remain unanswered.

I. INTRODUCTION

Adolescence is a developmental period during which emotional, behavioural, and psychological difficulties may emerge or become more pronounced. South Asia represents a particularly important setting for adolescent mental health research because of its large young population and substantial limitations in specialist mental health services. A recent systematic review highlighted the burden and determinants of mental health problems among

adolescents in South Asia, while previous reviews have also identified substantial gaps in the availability of evidence-based interventions for young people in the region (Mudunna et al., 2025; Willmot et al., 2023). Access to professional mental health care remains difficult for many children and adolescents. Shortages of psychologists, psychiatrists, counsellors, and other trained professionals can limit the capacity of conventional clinic-based services. In addition, stigma, treatment costs, transportation difficulties, and low awareness may prevent families from seeking professional support. Schools provide an alternative platform for delivering mental health interventions. Children and adolescents spend a substantial proportion of their time in educational settings, making schools potentially useful locations for prevention, early identification, and intervention. School programmes can also reach students who might not otherwise present to mental health services.

One strategy that has received increasing attention in low-resource settings is task-sharing. Under this approach, structured psychological or psychosocial interventions are delivered by trained non-specialists under appropriate supervision rather than exclusively by highly specialised mental health professionals. This model may increase the reach of services where the specialist workforce is limited. Evidence from South Asia has included targeted psychological interventions, whole-school programmes, classroom-based psychosocial interventions, and health-promotion approaches. However, the evidence is unevenly distributed across countries and intervention types. The available literature also includes both effectiveness trials and smaller feasibility studies, making direct interpretation of the overall evidence difficult. The present review therefore focuses specifically on randomised evidence concerning school-based mental health interventions in South Asia. The main questions were: (1) What school-based mental health interventions have been evaluated using randomised designs in South Asia? (2) Who delivered these interventions and how were they implemented? (3) What effects have been reported on mental health and psychosocial outcomes? and (4) What lessons from the existing evidence are relevant to Pakistan?

II. METHOD

Review design

This study was conducted as a narrative review of randomised evidence rather than a formal systematic review. Studies were identified through targeted searches of published trial reports, trial registries, and reference lists of relevant reviews. Because no formal database screening was performed, screening counts are not reported, and relevant trials may have been missed. Searches were completed in September 2026.

Eligibility criteria

Studies were considered eligible when they used a randomised or cluster-randomised design; were conducted wholly or mainly in school settings; included children or adolescents; were conducted in one of the eight SAARC countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, or Sri Lanka); and reported a mental health or psychosocial outcome. Psychological, psychosocial, whole-school health-promotion, and physical-activity interventions were eligible when a mental health outcome was assessed. Universal, selective, and indicated interventions were considered. Feasibility studies were described separately from effectiveness trials.

Data extraction

Information extracted from the available evidence included country, study design, sample size, participant characteristics, intervention characteristics, delivery agent, comparator, outcomes, follow-up period, and reported intervention effects. Extracted figures were cross-checked against the published abstract of each trial and against the full-text article where it was openly available.

III. RESULTS

Overview of identified evidence

Six effectiveness trials and two feasibility studies were identified across five South Asian countries: Pakistan, India, Bangladesh, Nepal, and Sri Lanka. No eligible school-based trials were identified from Afghanistan, Bhutan, or Maldives in the reviewed evidence. Most effectiveness studies used non-specialist delivery models. The interventions varied from targeted psychological treatment for adolescents with elevated distress to universal whole-school health promotion and physical activity programmes.

Psychological intervention in Pakistan

Hamdani et al. (2024) evaluated a group psychological intervention based on the WHO Early Adolescent Skills for Emotions (EASE) approach in public schools in rural Gujar Khan, Rawalpindi. The cluster-randomised trial included 40 schools and 566 adolescents aged 13–15 years who had elevated psychosocial distress. The intervention consisted of seven group sessions for adolescents together with three caregiver sessions. Delivery was undertaken by trained non-specialists. At three months, adolescents receiving the intervention had lower psychosocial distress than those in the wait-list comparison group. The reported effect size was 0.38 (95% CI 0.18–0.57). No adverse events were reported in the trial. The findings provide evidence that a structured psychological intervention can be delivered through schools by trained non-specialists in a Pakistani rural setting. The study is particularly relevant to Pakistan because it addresses both the mental health workforce shortage and the practical challenges of delivering psychological support outside specialist clinical services.

PRIDE intervention in India

The PRIDE trial (Michelson et al., 2020) was conducted in six government schools in New Delhi and included 250 students with elevated symptoms, with a mean age of approximately 15.6 years. Students received four to five problem-solving sessions over three weeks from lay counsellors, together with booklets; the comparison group received booklets alone. At six weeks, the intervention was associated with fewer self-identified problems, with an effect size of 0.36 (95% CI 0.11–0.61). However, there was no statistically significant difference in the Strengths and Difficulties Questionnaire (SDQ) at that point. A later 12-month follow-up reported an adjusted mean difference of –0.75 (95% CI –1.47 to –0.03; $p = .04$) for the Youth Top Problems measure. The corresponding SDQ adjusted mean difference was –1.73 (95% CI –3.47 to 0.02; $p = .05$). This 12-month analysis was a post hoc extension of the original trial, and 70.4% of participants were retained (Malik et al., 2021).

SEHER whole-school intervention in India

The SEHER trial (Shinde et al., 2018) was conducted in government secondary schools in Nalanda, Bihar, India. It included 13,035 grade-nine students at baseline, with 14,414 students assessed at endline. The study used a three-arm cluster-randomised design comparing a whole-school health-promotion intervention delivered by lay counsellors or teachers with the existing Adolescence Education Program. After eight months, the lay-counsellor arm demonstrated an improvement in school climate, with a reported effect size of 1.88. Improvements were also reported in depression, bullying, and violence. The reported adjusted mean difference for depression was –1.23. In contrast, the teacher-delivered arm did not show an effect on the reported outcomes. The earlier pilot study had already found lower coverage of intervention activities in teacher-delivered schools because of competing teaching duties (Shinde et al., 2017). The subsequent extension study reported that benefits were sustained over two academic years (Shinde et al., 2020). The SEHER findings are particularly relevant to the question of who should deliver school-based mental health programmes. The available evidence provides a direct comparison between lay counsellors and teachers, with benefits observed in the counsellor arm but not in the teacher arm.

Physical activity intervention in Bangladesh

A cluster-randomised trial conducted in eight high schools in Dhaka (Ahmed et al., 2023) evaluated a 12-week multicomponent physical activity programme involving supervised circuits, lunchtime sports, health education, and informational materials. The study included 320 students in grades 8 and 9, aged approximately 13–16 years. Compared with students in control schools, participants receiving the intervention had lower depressive symptoms. The multivariable analysis showed a between-group difference of $\beta = -4.60$ (95% CI –5.76 to –3.46). Life satisfaction was also higher in the intervention group, with $\beta = 1.43$ (95% CI 0.77–2.10). These findings broaden the scope of school mental health interventions beyond conventional psychological treatment and suggest that health-promotion activities may also influence adolescent mental health indicators.

Evidence from Nepal

Jordans et al. (2010) evaluated a classroom-based psychosocial intervention among children affected by armed conflict in Nepal. The trial included 325 children aged 11–14 years with elevated psychosocial distress. The intervention was delivered by paraprofessionals. After adjustment for clustering within schools, there was no evidence of an overall treatment effect on the primary psychiatric outcomes. However, subgroup analyses identified improvements in some social and behavioural outcomes. The findings demonstrate that overall

intervention effects may differ from subgroup-specific effects and that cluster adjustment can substantially influence interpretation of school-based trial findings.

Evidence from Sri Lanka

Tol et al. (2012) examined a school-based psychosocial intervention among children affected by war in Sri Lanka. The trial included children aged 9–12 years and used a classroom-based programme incorporating cognitive-behavioural techniques and creative expression. The study did not demonstrate an overall intervention effect on PTSD, depression, or anxiety at three months. An effect was observed for conduct problems. The results also differed by sex: boys showed greater improvement in PTSD and anxiety outcomes, while girls in the intervention group showed less improvement in PTSD symptoms than girls in the wait-list group. These findings emphasise the importance of examining possible differences in intervention response according to sex, age, and exposure to traumatic experiences.

Feasibility evidence from Pakistan

Two Pakistani feasibility studies provided additional information about implementation. Hamdani et al. (2022) evaluated a culturally adapted EASE intervention in eight schools involving 59 adolescents. Approximately 83% of adolescents participated, while caregiver participation was approximately 50%. These findings suggest that adolescent engagement can be achieved but that caregiver involvement may require additional strategies. Ijaz et al. (2024) evaluated an eight-session group cognitive behavioural therapy programme for anxiety among students in four semi-government schools. The study included 34 students with elevated anxiety, with a mean age of approximately 15 years. The intervention was considered feasible and acceptable, but the sample was too small to provide reliable estimates of treatment effects.

IV. DISCUSSION

This review indicates that school-based mental health interventions using trained non-specialists are feasible in several South Asian settings. The strongest evidence for short-term benefits comes from targeted interventions involving students who already demonstrate psychological distress, particularly the EASE intervention in Pakistan and the PRIDE intervention in India. The Pakistani EASE trial is important because it demonstrates that a structured psychological intervention can be delivered in public schools by trained non-specialists and can produce a measurable reduction in psychosocial distress after three months. However, the effect was modest, and evidence regarding longer-term outcomes remains limited. The Indian PRIDE programme provides additional evidence for lay counsellor delivery. Although the initial six-week assessment showed improvement in students' self-identified problems rather than a clear overall SDQ effect, the later 12-month assessment suggested improvement in selected outcomes. Interpretation of these longer-term results should nevertheless remain cautious because the follow-up was a post hoc extension and retention was approximately 70%.

SEHER provides a different model because it addressed the school environment rather than focusing exclusively on students with identified symptoms. Its results suggest that whole-school health promotion can improve school climate and several student outcomes when implemented by lay counsellors. However, the absence of effects in the teacher-delivered arm suggests that simply assigning additional mental health responsibilities to teachers may not produce the same results. The evidence from Nepal and Sri Lanka demonstrates that school-based psychosocial programmes may have heterogeneous effects. In conflict-affected populations, psychological distress can be shaped by trauma exposure, gender, social circumstances, and other contextual factors. Consequently, interventions that produce benefits for some subgroups may not necessarily produce a uniform population-level effect. The Bangladesh physical activity trial is also noteworthy because it indicates that mental health promotion may not always require a conventional psychological treatment model. Physical activity and other school-based health-promotion strategies may provide additional opportunities for prevention and wellbeing promotion. However, only a small number of such interventions have been evaluated in the South Asian context.

Implications for Pakistan

Pakistan has some of the most relevant evidence in the regional literature, particularly from public schools in Rawalpindi. Nevertheless, geographical coverage remains limited. Existing school-based trial evidence is

concentrated in and around Rawalpindi, while comparatively little evidence is available from Sindh, Khyber Pakhtunkhwa, Balochistan, and urban Punjab. A larger cluster-randomised trial of a technology-assisted WHO school mental health programme, enrolling 960 children aged 8 to 13 years across 80 schools in rural Rawalpindi, has also been registered (NCT04091633; Hamdani et al., 2021). The registry lists this trial as completed in 2021, but no results had been published at the time of writing. Publication of these results would substantially strengthen the Pakistani evidence base, particularly on whether teachers can deliver school mental health programmes at scale. Future Pakistani research should therefore examine whether interventions that work in rural Rawalpindi can be implemented effectively in different educational, cultural, and socioeconomic settings. The evidence also supports further investigation of dedicated non-specialist counsellor roles. Where teachers already have substantial educational responsibilities, adding mental health tasks may reduce intervention coverage or fidelity. The SEHER comparison provides a useful example of why delivery-agent characteristics should be considered when designing school mental health programmes. Caregiver participation is another important implementation issue. Although adolescent participation in the Pakistani feasibility study was high, only approximately half of caregivers attended their sessions. Future interventions may need more flexible approaches to caregiver engagement, including alternative session formats and communication strategies.

Long-term outcomes

Long-term evidence remains a major gap. Only PRIDE and SEHER followed participants beyond one school year among the trials identified in this review. The PRIDE long-term results were obtained through a post hoc extension, while SEHER provided follow-up over two academic years. Longer follow-up is important because short-term improvement does not necessarily indicate sustained mental health benefit. Future trials should ideally include assessments at 6, 12, and 24 months where feasible.

Adverse effects and equity

Mental health intervention research should assess not only beneficial outcomes but also potential adverse effects. The Sri Lankan trial illustrates why this is important: there was no overall effect on the main psychological outcomes, and subgroup findings indicated that girls receiving the intervention improved less on PTSD symptoms than girls in the comparison condition. Future studies should therefore report outcomes separately according to sex, age, socioeconomic circumstances, and trauma exposure where sample sizes allow. Such analyses may help identify groups for whom an intervention is less effective or requires adaptation.

Strengths and Limitations

This review has several strengths. It focuses specifically on school-based interventions in South Asia and brings together psychological, psychosocial, whole-school, and health-promotion approaches. It also distinguishes effectiveness trials from feasibility studies, allowing findings concerning treatment effects to be separated from evidence concerning acceptability and implementation. However, several limitations should be considered. First, this was a narrative review based on targeted searching rather than a registered systematic review with a comprehensive database search. Second, formal screening counts were not available. Third, risk of bias was not formally assessed. Fourth, the evidence base is geographically concentrated in a small number of countries and research groups. Finally, data were extracted by a single reviewer, which increases the risk of extraction error. These limitations mean that the findings should be interpreted as a narrative synthesis of available randomised evidence rather than as a definitive estimate of the overall effectiveness of school-based mental health interventions in South Asia.

V. CONCLUSION

School-based mental health interventions delivered by trained non-specialists represent a potentially useful approach for expanding psychological support for children and adolescents in South Asia. Existing randomised evidence suggests that targeted interventions for distressed adolescents can produce short-term improvements, while whole-school and health-promotion approaches may also improve selected mental health or school-related outcomes. For Pakistan, the current evidence demonstrates feasibility but also highlights substantial gaps. More research is required in provinces and urban settings that are currently underrepresented, with longer follow-up periods, systematic monitoring of adverse outcomes, stronger caregiver engagement, and assessment of

implementation and cost. Rather than relying solely on specialist services, future Pakistani school mental health programmes may benefit from carefully supervised task-sharing models. However, before large-scale implementation, additional evidence is needed to determine whether positive trial findings can be reproduced across different populations, schools, and regions.

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Generative AI (Claude, Anthropic) was used to assist with language editing, structuring the manuscript and cross-checking extracted figures against source abstracts. The author reviewed all content, verified the data against the original sources and takes full responsibility for the manuscript.

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