

## REVIEW ARTICLE

# Interventions to improve girls' school attendance in Africa: An expert review of current evidence and future perspectives

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### ABSTRACT

Gender disparities in education remain a significant challenge across Africa, particularly in sub-Saharan contexts, despite global commitments to educational equity. This expert review synthesises evidence on interventions to improve girls' school attendance, focusing on effectiveness, implementation challenges, and future directions. A structured literature search across four databases (ERIC, AJOL, Web of Science, and Google Scholar) identified 2,134 records, of which 33 studies met the inclusion criteria following screening and full-text review. The evidence indicates substantial contextual variation in attendance patterns, with reported absenteeism ranging from 74% in Mauritius to 16% in Botswana, reflecting differences in economic conditions, cultural norms, and educational infrastructure. Poverty consistently emerged as a primary constraint on attendance, alongside socio-cultural practices such as early marriage and gendered household responsibilities. Health-related barriers, particularly menstruation-related challenges, were also significant, with evidence from several settings indicating that many girls miss multiple school days per month due to inadequate menstrual hygiene management and sanitation facilities. The interventions reviewed include financial support mechanisms, policy reforms, school-based improvements, community engagement initiatives, and cross-sectoral health-education programmes. Multicomponent initiatives addressing multiple barriers simultaneously demonstrate greater and more sustained impact than single-focus strategies, although evidence on long-term sustainability and cost-effectiveness remains limited. The review highlights the need for context-sensitive, integrated approaches that engage households, communities, and schools to achieve sustained improvements in girls' educational participation and outcomes across Africa.

### KEYWORDS:

Africa, gender inequality, girls' education, interventions, school attendance

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## INTRODUCTION

The issue of gender disparity in education remains a significant challenge across Africa, particularly in the Sub-Saharan regions. In this study, the primary focus is on girls' school attendance, understood as girls' regular participation in schooling once enrolled. Related concepts, such as enrolment (initial entry into school), retention (continued participation over time), learning outcomes (academic performance and skills acquired), and empowerment (broader social and personal agency gained through education), are analytically distinct but closely interconnected in practice, and are referenced where relevant to contextualise attendance patterns.

Recent research highlights how gender disparity in education emerges from complex interactions among cultural, structural, and policy factors that shape girls' opportunities to enter school, remain in school, and attend regularly. Despite progress toward Sustainable Development Goals 4 (Quality Education) and 5 (Gender Equality), ensuring equitable access and sustained attendance for girls remains a persistent challenge <sup>1</sup>. Current estimates indicate that approximately 129 million girls worldwide remain out of school, with nearly 32 million of primary school age, largely concentrated in sub-Saharan Africa (SSA) <sup>2</sup>.

The multifaceted nature of this challenge encompasses interconnected barriers, including poverty, early marriage, gender-based violence, and cultural norms that often prioritise boys' education over girls' <sup>3</sup>. Infrastructure limitations, such as inadequate sanitation facilities and long distances to schools, further limit regular attendance, particularly in rural contexts <sup>4</sup>. The COVID-19 pandemic has exacerbated these patterns, with evidence suggesting that girls experience greater difficulties returning to school and sustaining attendance following disruption <sup>5</sup>.

While existing systematic reviews <sup>6</sup> provide rigorous assessments of interventions aimed at reducing gender-related barriers to girls' schooling, this review largely emphasises intervention effectiveness and learning outcomes across diverse global contexts. Less attention has been given to Africa-specific implementation challenges, interaction effects

between socioeconomic and cultural barriers, and the sustainability of multicomponent interventions. This expert review addresses these gaps by synthesizing recent Africa-focused evidence (2000-2024), with particular attention to contextual, cultural, and policy dimensions that influence girls' school attendance. By grouping findings into analytically distinct but interconnected domains, access (enrolment and physical access), participation (attendance and retention), experience (school climate, safety, and learning conditions), and outcomes (longer-term educational and social consequences), the review provides a systematic comparative framework for understanding both barriers and intervention effectiveness.

The remainder of this paper is structured as follows: Section 2 outlines the method used to conduct the study; Section 3 presents the results; and the concluding section summarises key findings, highlights gaps in the literature, and proposes an agenda for future research.

## METHODS

This expert review conducted a structured literature review to provide a comprehensive and unbiased synthesis of the existing evidence on girls' education in Africa. The approach was guided by the PRISMA framework to ensure transparency in reporting information sources, eligibility criteria, and the study selection process.

### Information Sources and Search Process

Literature searches were conducted in four major databases: ERIC, African Journals Online (AJOL), Web of Science (WoS), and Google Scholar. The search focused on publications from 2000 to 2024 to capture contemporary evidence. Keywords and Boolean operators were applied consistently across databases to maximise coverage, including:

- (“girls’ education” OR “female education”) AND Africa
- (“school attendance” OR enrolment) AND (“gender disparity” OR “gender gap”) AND Africa
- (“girls’ education” AND intervention AND Africa)

The initial search retrieved 2,134 articles. After removing duplicates (n=412), 1,722 articles were screened for relevance based on title and abstract. Of these, 1,342 were excluded for being irrelevant to the African context, lacking empirical or policy focus, or having insufficient methodological quality. A full-text review of 380 articles identified 33 studies that met all inclusion criteria for the final synthesis.

### Inclusion and Exclusion Criteria

Included sources comprised peer-reviewed journal articles, reports from reputable international organisations, and policy documents that explicitly addressed girls' education in African countries. Studies were included if they reported on school attendance, enrolment, retention, learning outcomes, or interventions affecting these outcomes. Excluded sources were those outside the African context, non-English publications, opinion pieces without empirical or policy evidence, and students focusing solely on boys or a gender-neutral population.

### Minimizing Bias

The bias was minimized through several strategies. The search was conducted independently by two reviewers, and disagreements regarding eligibility were resolved through discussion and consensus. Multiple databases were utilized to minimize publication bias, and both peer-reviewed and grey literature were included to capture a comprehensive evidence base. Data extraction and synthesis followed a structured narrative approach, ensuring consistent interpretation across

studies while acknowledging context-specific differences in findings.

The process enabled a comprehensive and systematic analysis of the literature, highlighting key barriers, interventions, and contextual factors affecting girls' school attendance in Africa while providing transparency and reproducibility of the review methods.

### Ethical Considerations

This study did not involve any primary data collection; all data were drawn from publicly available sources, peer-reviewed articles, and reports from reputable organisations. As such, formal ethical approval was not required. The review adhered to standard ethical practices in research synthesis, including accurate citation of sources, transparent reporting, and unbiased interpretation of evidence.

## RESULTS

### Gender Disparity in School Attendance

Across the reviewed literature, girls' school absenteeism emerges as a persistent and unevenly distributed challenge across African contexts. As summarised in Table 1, reported absenteeism levels vary substantially between and within countries, reinforcing the conclusion that attendance challenges are highly context-specific rather than uniform across the region.

**Table 1.** Geographic variation in girls' school attendance in SSA

Country / Region	Reported Absenteeism (%)	Key Notes / Sub-national Variation	Source
Mauritius	74%	High national absenteeism	Lee & Rudolf <sup>7</sup>
Botswana	16%	Lower relative absenteeism compared to regional peers	Lee & Rudolf <sup>7</sup>
Zambia	68%	High levels of absenteeism among adolescent girls	Lee & Rudolf <sup>7</sup>
Uganda	65%	Persistent absenteeism despite enrolment	Ayikoru et al. <sup>11</sup>
South Africa (Eastern Cape)	22.4%	Girls missing school due to menstruation-related barriers	Macleod et al. <sup>20</sup>
Tanzania	~50%	Girls missing approximately four school days per month due to menstruation	Mbatia et al. <sup>18</sup>
Nigeria – North	High (contextually reported)	Absenteeism linked to poverty, early marriage, and sociocultural norms	Nwozor & Okhillu <sup>8</sup> Tuki <sup>9</sup>
Malawi – North	Not consistently quantified	Evidence of frequent absenteeism linked to WASH and poverty constraints	Chidya et al. <sup>17</sup>

Kenya	Substantial (qualitative evidence)	Absenteeism and dropout linked to pregnancy and early marriage	Thirugnanasampanthar <sup>24</sup>
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Source: Authors' own computation

Cross-national evidence illustrates this heterogeneity clearly. Reported absenteeism rates range from 74% in Mauritius, 68% in Zambia, and 65% in Uganda to considerably lower levels, such as 16% in Botswana<sup>7</sup>. These contrasts suggest that regional averages conceal important contextual differences and that national-level indicators alone provide an incomplete picture of girls' educational participation.

Country-specific studies further demonstrate that absenteeism is shaped by locally embedded factors. In South Africa's Eastern Cape, for example, 22.4% of schoolgirls reported missing school due to menstruation-related challenges, resulting in an average loss of approximately 18 school days per year<sup>20</sup>. In Tanzania, nearly half of the schoolgirls were reported to miss approximately four school days per month due to menstruation-related barriers<sup>18</sup>. While the magnitude differs across contexts, these findings converge on a consistent pattern: absenteeism is not an isolated behavioural issue but reflects deeper structural, socio-cultural, and health-related constraints.

Importantly, several studies highlight that absenteeism frequently persists even where enrolment levels have improved. Evidence from Malawi, Northern Nigeria, and Kenya suggests that poverty, early marriage, pregnancy, and household labour responsibilities contribute to ongoing irregular attendance, even among enrolled learners<sup>8, 17, 24</sup>. This reinforces the analytical distinction between access to schooling and sustained participation within schooling.

Taken together, the evidence synthesised in Table 1 supports a central interpretive conclusion of this review: girls' absenteeism across Africa is shaped by the interaction of economic constraints, gender norms, health-related challenges, and school environments. The variation observed across settings does not indicate inconsistency in the evidence but rather underscores the importance of contextualised analysis when interpreting patterns of school participation.

### Determinants of Girls' School Attendance

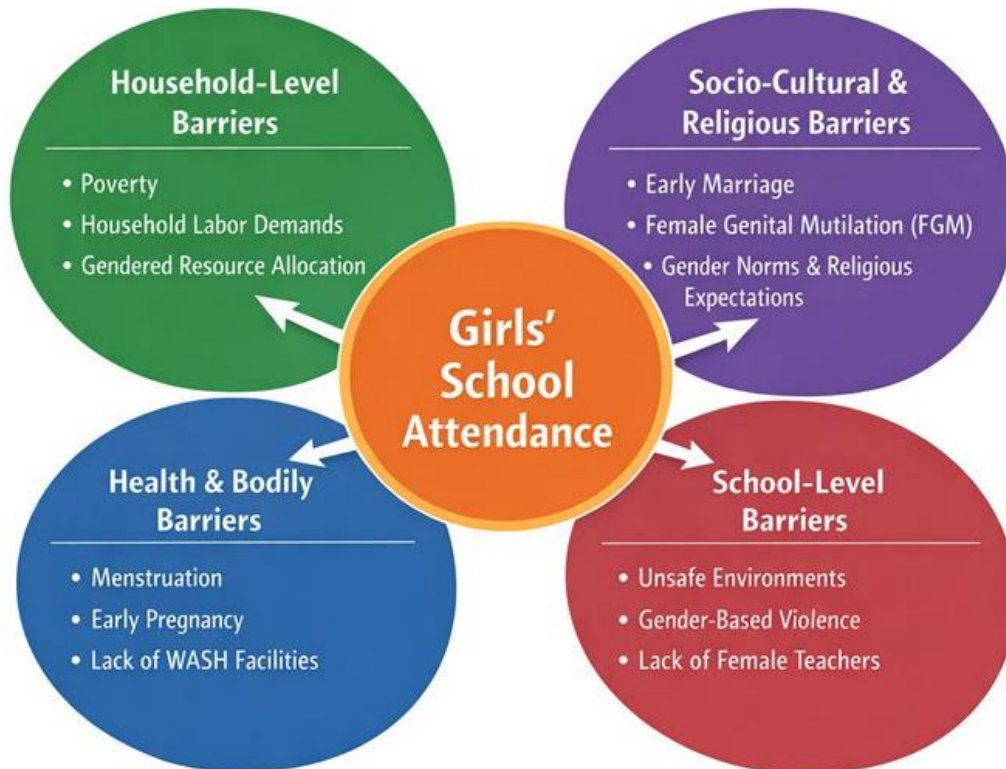
Barriers to attendance can be synthesised into four interrelated domains:

1. Household-level barriers: Poverty consistently emerges as the most pervasive inhibitor of attendance, affecting both direct school costs and indirect costs such as uniforms, learning materials, and transportation. Evidence from Malawi, Tanzania, and Northern Nigeria demonstrates that wealthier households are better able to sustain girls' attendance<sup>10, 12-13</sup>.
2. Socio-cultural and religious factors: Early marriage, gender norms, religious expectations, and practices such as female genital mutilation (FGM) systematically constrain girls' schooling. FGM comprises all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons<sup>34</sup>. Contextual evidence suggests that these norms operate differently across settings, yet the underlying mechanism that limits the perceived value of girls' education relative to that of boys remains consistent.
3. Health and bodily barriers: Menstrual hygiene challenges, early pregnancy, and limited access to sanitation significantly disrupt attendance. Studies indicate that nearly half of schoolgirls in SSA miss four school days per month due to menstruation, with effects amplified in schools lacking appropriate facilities<sup>17, 18-20</sup>. Early pregnancy and marriage represent decisive turning points, often precipitating permanent withdrawal from school<sup>23, 24</sup>.
4. School-level barriers: Hostile or unsafe learning environments, gender-based violence, weak infrastructure, and the absence of female role models further reduce regular attendance. These factors highlight that structural and psychosocial dimensions of schooling interact with economic and cultural constraints to influence attendance outcomes.

Figure 1 presents a conceptual framework illustrating how girls' school attendance is shaped by the

cumulative interaction of four interrelated domains: household-level barriers, socio-cultural and religious barriers, health and bodily barriers, and school-level barriers. The framework shows that household-level constraints such as poverty, domestic responsibilities, and limited parental support are linked with socio-cultural and religious norms that influence expectations around girls' education, early marriage, and mobility. Health and bodily factors, including menstruation-related challenges, limited access to

sanitation facilities, and exposure to practices such as FGM, are depicted as further factors contributing to absenteeism. School-level conditions, including safety infrastructure, teacher attitudes, and learning environments, are shown to interact with barriers operating outside the school. Figure 1, therefore, illustrates that these four domains operate simultaneously and interactively rather than independently in shaping girls' attendance outcomes.



**Figure 1.** Barriers to girls' school attendance  
*Source: Authors' Own Conceptual Model*

### The Impact of Gender Disparity in School Attendance

The consequences of gender disparities in school attendance extend across economic, health, and social dimensions. Economically, educational inequalities limit labour market participation, reduce national productivity, and perpetuate intergenerational poverty; for instance, addressing child marriage in Uganda has been estimated to generate up to US\$3 billion annually by 2030<sup>29</sup>. Health and social outcomes are also

affected, as reduced schooling is associated with higher adolescent pregnancy rates, lower contraceptive use, and poorer maternal and child health outcomes<sup>9, 24</sup>. Beyond these individual and community-level effects, limited access to education reinforces broader social inequalities by constraining girls' future opportunities and perpetuating gendered hierarchies and traditional norms across communities<sup>15, 27</sup>.

## Various Interventions Implemented to Address Girls' School Attendance in Education

Interventions can be classified into five broad categories (see Table 2 for synthesis of evidence and effectiveness):

**Table 2.** Summary of interventions and effectiveness on girls' attendance

Intervention Type	Key Strategies / Examples	Effectiveness / Evaluation	Source
Economic Interventions	Cash transfers, scholarships, and school feeding	Short-term gains in enrollment; limited sustained attendance	World Bank <sup>3</sup> ; African Development Bank <sup>4</sup>
Family and Community-Based Interventions	Parental engagement, NGO programs, advocacy	Stronger outcomes when combined with economic or school-based support	Bertoletti et al. <sup>5</sup> ; UNICEF <sup>2</sup>
School-Level Interventions	Infrastructure improvement, safety measures, and female teachers	Improved learning environment and attendance; sustained impact when integrated with family support	Chidya et al. <sup>17</sup> ; Idu et al. <sup>28</sup>
Policy and Structural Interventions	National education policies, legal frameworks	Necessary but insufficient alone; success depends on implementation & local engagement	Lee & Rudolf <sup>7</sup>
Cross-Sectoral Interventions	Health programs integrated with education (MHM, health support)	Most robust and sustained impact; reduces barriers across domains	Mponda & Kaombe <sup>10</sup> ; Chidya et al. <sup>17</sup>

Source: Authors' Own Categorisation

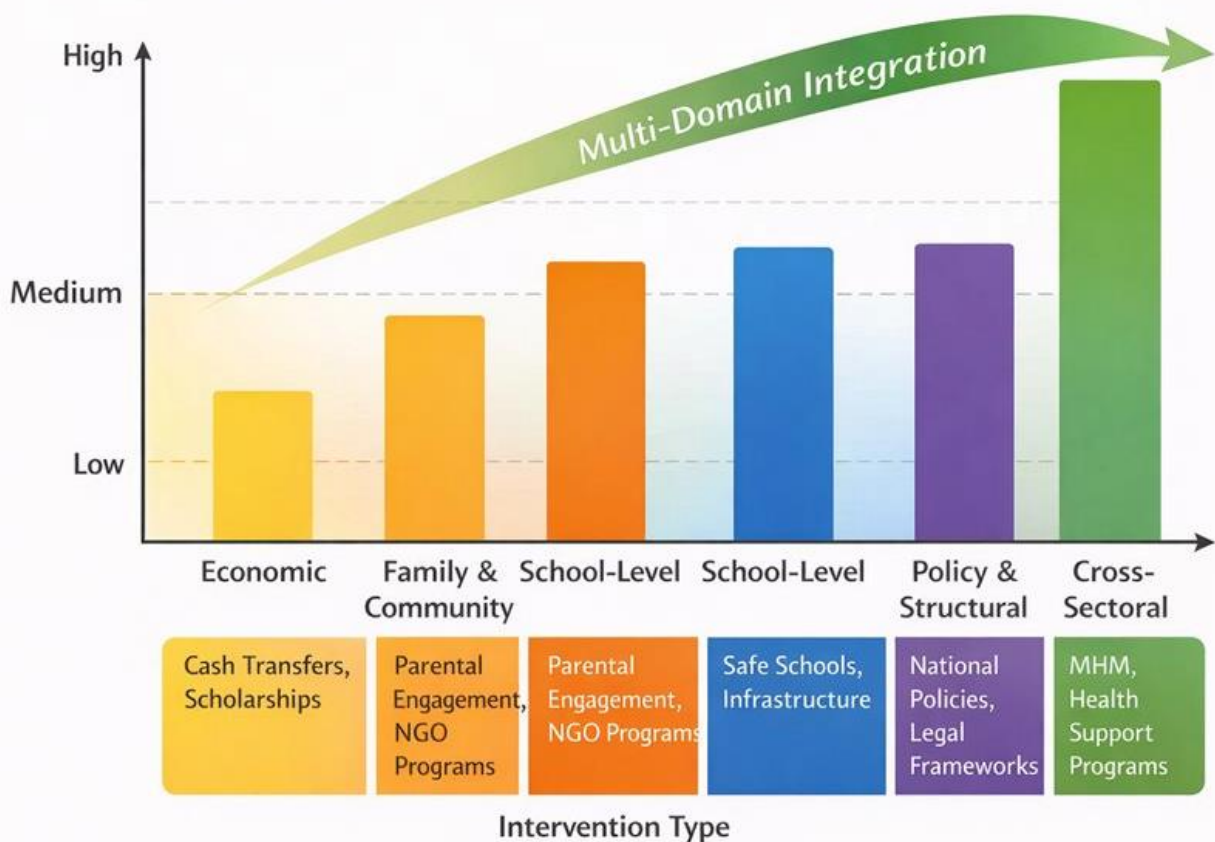
The findings indicate that economic interventions such as cash transfers, scholarships, and school feeding programmes are associated with improvements in enrolment and short-term attendance, though these gains are often not sustained without complementary strategies. Family- and community-based interventions, including parental engagement initiatives and NGO-led programmes, tend to show stronger effects when implemented alongside economic or school-based approaches. School-level interventions, such as infrastructure improvements, safety measures, and mentorship programmes, contribute to more supportive learning environments and are linked to more consistent attendance over time. Policy and structural interventions, including national education policies and legal frameworks, appear necessary for creating an enabling environment, but on their own, they are insufficient without effective local implementation mechanisms. In contrast, cross-sectoral interventions that integrate components across health, education, and social support sectors demonstrate the most robust and sustained effects on girls' school attendance.

Additionally, the synthesis across studies<sup>14-16,19,21,22,25,26,31-33</sup> consistently suggests that multicomponent interventions addressing multiple barriers

simultaneously produce more durable improvements than single-focus strategies. When interventions targeted only one dimension (e.g., cash transfers alone), short-term attendance gains were observed, but sustained impact was limited. By contrast, interventions embedded in local social and economic contexts that consider sociocultural norms and school conditions are more likely to achieve lasting results.

Figure 2 illustrates the comparative effectiveness of interventions across domains, highlighting the conditions under which programmes succeed or falter. A comparative pattern emerges across intervention types. Interventions that target a single dimension of disadvantage (for example, financial incentives alone) tend to improve enrolment or short-term attendance but are less sustainable. By contrast, interventions that operate across multiple domains simultaneously, for example, combining economic support with family engagement and school-level improvements, demonstrate more consistent positive effects on sustained attendance. This comparative insight does not reflect a new empirical claim but synthesises consistent patterns across the reviewed literature. It highlights that the effectiveness of interventions is less dependent on their specific form and more dependent

on the breadth of barriers they address the extent to which they are embedded in local contexts.



**Figure 2.** Comparative effectiveness of interventions to improve girls' school attendance  
*Source: Authors' Own Conceptual Model*

## CONCLUSION

Taken together, the findings of this review suggest a coherent conceptual pattern: girls' school attendance is shaped by the interaction of household, socio-cultural, health-related, and school-level factors, and interventions are most effective when they engage with multiple dimensions of this system simultaneously. The novelty of this review lies not in the generation of new empirical data but in the structured synthesis of fragmented evidence into a clearer comparative framework. This approach makes it clear why certain interventions consistently underperform (those addressing isolated barriers) while others show greater potential (those adopting integrated context-sensitive designs). Several interventions failed due to common limitations, including weak implementation, limited

resources, inadequate sustainability planning, and insufficient attention to local cultural contexts.

This review also has important limitations that should be acknowledged. As a narrative expert review rather than a full systematic review or meta-analysis, the study relied on published literature and selected grey sources, which introduces the possibility of publication bias and subjective judgement in study selection and interpretation. Although the search strategy was structured, it may not have captured all relevant studies, particularly unpublished evaluations and locally produced reports. Additionally, the heterogeneity of study designs, outcome measures, and contextual settings limit the ability to make strong causal claims about the intervention's effectiveness.

Despite these limitations, the review offers a valuable synthesis of Africa-focused evidence, highlighting consistent patterns that can inform future research and policy. Key lessons nevertheless emerge for future programmes. Effective interventions should integrate household economic support, family engagement, health services, and educational improvements. Programmes must be grounded in local cultural contexts and involve community members to ensure relevance and sustainability. A focus on economic empowerment, combined with efforts to transform gender norms, appears particularly important. Increased access must be accompanied by improvements in teaching quality and learning environments. Interventions need clear transition strategies to avoid dependency. Multiple metrics should assess attendance, learning outcomes, and long-term impact on girls' attendance and education.

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## CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest related to this article.

## AUTHORS' CONTRIBUTIONS

This was an invited expert review paper by the editor-in-chief of the ASFI Research Journal, which was drafted by DH and then revised considering feedback from SBME, EFFF, KHM, VVMD, ROO, NJ, JM, and AA. All authors approved the final version of the manuscript.

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