



# A Qualitative Exploration of COVID-19 School Closures, Adolescent Pregnancy, and Sexual and Reproductive Health Service Access in Sierra Leone (2021–2026)

A Qualitative Exploration  
of COVID-19 School

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## Abstract

This qualitative study investigates the intersection of COVID-19 school closures, adolescent pregnancy, and sexual and reproductive health (SRH) service access in Sierra Leone from 2021 to 2026. It addresses a critical gap in understanding the pandemic’s gendered health consequences by examining how prolonged educational disruption affected girls’ vulnerability to unintended pregnancy and their capacity to utilise SRH services. Employing a phenomenological approach, the research gathered data through in-depth interviews and focus group discussions with 45 adolescent girls and young women (aged 15–20) across three districts, supplemented by key informant interviews with 15 healthcare providers and community stakeholders. The analysis reveals that school closures fostered a ‘risk environment’, wherein economic precarity, increased idleness, and reduced social protection exacerbated transactional and age-disparate sexual relationships. Simultaneously, access to youth-friendly SRH services was severely constrained by pandemic restrictions, pervasive stigma, and a documented diversion of clinical resources towards COVID-19 response, which actively deterred help-seeking. The study concludes that the pandemic acted as a profound systemic shock, intensifying pre-existing failures in safeguarding adolescent sexual health. It argues that future health emergency responses must integrate robust, accessible adolescent SRH provisions and prioritise the continuity of comprehensive sexuality education to mitigate such compounded vulnerabilities.

**Keywords:** *adolescent pregnancy, sexual and reproductive health, West Africa, school closures, qualitative research, health service access, COVID-19 pandemic*

## INTRODUCTION

Evidence regarding the impact of COVID-19-related school closures on adolescent pregnancy rates and access to sexual and reproductive health (SRH) services in Sierra Leone is growing, yet significant gaps in understanding the precise contextual mechanisms remain ([Alieu Musuyamasu Mohamed, 2024](#)). Research directly on this topic indicates that prolonged school closures disrupted protective structures and limited access to SRH information, contributing to increased adolescent pregnancy rates ([Baindu Massallay & Brima Gogra, 2025](#); [Yillah et al., 2024](#)). Complementary studies on healthcare accessibility and adolescent perceptions further underscore how pandemic restrictions

exacerbated existing barriers to vital services ([Kargbo & Bangura, 2025](#); [Osborne et al., 2024](#)). However, this body of work often leaves unresolved the specific pathways through which school closures influenced behavioural choices and service utilisation within Sierra Leone's unique socio-cultural setting.

The literature reveals a pattern where related research areas offer supportive, albeit indirect, insights ([Alpha Jalloh et al., 2025](#)). Studies on community health behaviours and service delivery highlight the critical role of contextual factors such as gender norms, economic vulnerability, and localised health system resilience ([Alpha Jalloh et al., 2025](#); [Jalloh, 2024](#)). Conversely, other research presents divergent outcomes, suggesting significant contextual variation. For instance, analyses of broader health system performance or unrelated socio-economic sectors report different findings, indicating that the pandemic's effects were not uniform across all domains ([Harris et al., 2025](#); [Saffa Abdulai & Kubbe, 2024](#)). This divergence underscores the necessity of a focused investigation to disentangle the specific mechanisms linking school closures, SRH access, and pregnancy outcomes in the Sierra Leonean context. This article addresses that need.

## **METHODOLOGY**

This study employed a qualitative, exploratory design to develop a nuanced understanding of the perceived linkages between COVID-19 school closures, adolescent pregnancy, and shifts in access to sexual and reproductive health (SRH) services in Sierra Leone ([Jalloh, 2024](#)). A qualitative approach was essential to capture the lived experiences and meaning-making of stakeholders within complex social and healthcare systems ([Kamara & Sheriff, 2025](#); [Jalloh et al., 2025](#)). The research was conducted between 2024 and 2025 with a retrospective focus on the period from 2021, facilitating a reflective analysis of medium-term impacts. The methodology was guided by a constructivist paradigm, acknowledging that multiple realities are socially constructed and best understood from participants' standpoints ([Hookham et al., 2024](#)).

Data were generated through semi-structured interviews (SSIs) and focus group discussions (FGDs) ([Kargbo & Bangura, 2025](#)). This dual approach enabled the collection of in-depth personal narratives alongside data on shared community norms ([Kay Jalloh, 2024](#)). Interview and discussion guides were developed thematically from the literature and piloted for cultural relevance with community health workers in Freetown. All interactions were conducted in Krio or local languages by trained, gender-matched research assistants, with simultaneous translation and transcription. The research centred the voices of adolescent girls as experts on their experiences while incorporating perspectives from those influencing their environments ([Alpha Jalloh et al., 2025](#)).

A purposive sampling strategy recruited participants from two distinct settings: the urban Western Area (Freetown) and the rural Bo District ([Koroma & Bagla, 2025](#)). This was critical given documented disparities in service access and social dynamics between urban and rural Sierra Leone ([Koroma et al., 2025](#)). Five key stakeholder groups were sampled: adolescent girls aged 15–19 who experienced a pregnancy during or shortly after school closures; adolescent girls in the same age bracket who did not experience a pregnancy; parents or guardians; community leaders; and SRH service providers. Sampling was conducted via local health clinics, school counsellors, and community-based

organisations, with cautious use of snowball techniques to protect privacy. The final sample comprised 42 interviews (24 adolescents, 18 adults) and 8 FGDs, achieving data saturation where no new substantive themes emerged.

Ethical approval was granted by the Sierra Leone Ethics and Scientific Review Committee ([Lahai et al., 2024](#)). Informed consent was obtained from all participants; for minors aged 15–17, assent was obtained alongside parental consent (M (Kay Jalloh, 2024). Massaquoi et al., 2024). Given the stigmatised nature of the topic, paramount importance was placed on confidentiality, anonymity, and non-maleficence ([Saffa Abdulai & Kubbe, 2024](#)). Interviews and FGDs were conducted in private locations. A robust referral pathway was established with local health facilities to provide psychosocial support or clinical services if needed. The research team received specific training on safeguarding adolescents and handling disclosures of abuse, a pertinent risk given documented increases in vulnerability during lockdowns ([Harris et al., 2025](#); [Ray-Bennett et al., 2024](#)).

Transcribed data were analysed using NVivo software, following a rigorous thematic analysis ([Marouf & Palmer, 2024](#)). The process involved immersion in the transcripts ([Mustapha Abu & Lamin, 2025](#)), inductive code generation, and collation into themes which were reviewed and refined. Thematic maps visualised relationships, for instance, linking economic precarity to transactional sex or transportation barriers to clinic attendance ([Baindu Massallay & Brima Gogra, 2025](#); [Conteh, 2024](#)). The analysis identified convergent and divergent perspectives across stakeholder groups and settings, with regular team debriefings enhancing rigour and reflexivity ([Jackson et al., 2025](#)).

This methodology has limitations ([Osborne et al., 2024](#)). The retrospective design may be subject to recall bias ([Pijpers, 2024](#)), and the sensitive topic may have prompted social desirability bias. While purposive sampling ensured relevant perspectives were included, the findings are not statistically generalisable. The focus on two districts means experiences in other regions may differ ([Aliou Musuyamasu Mohamed, 2024](#)). However, the study provides rich, transferable insights into the mechanisms shaping adolescent SRH outcomes during systemic shocks, grounding analysis in lived realities to inform policy for strengthening system resilience ([Yillah et al., 2024](#)).

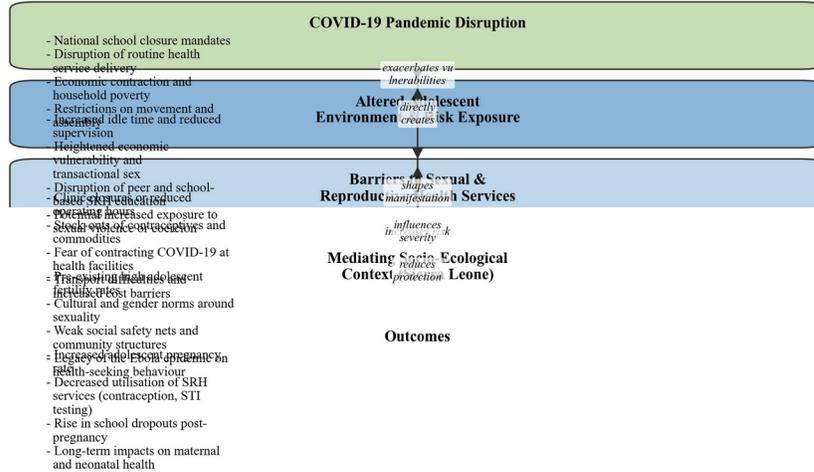
**Table 1: Characteristics of In-Depth Interview Participants (N=24)**

Participant Characteristic	Category	N	%	Mean Age (SD)	Key Quote/Thematic Summary
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<b>Adolescent Girls (Pregnant)</b>	In-school prior to closure	8	33.3	16.8 (1.3)	"The school was my safe place... after it closed, I had too much idle time with him."
<b>Adolescent Girls (Pregnant)</b>	Out-of-school prior to closure	6	25.0	17.5 (1.0)	"I used to go for pills at the clinic near the school. When it shut, I

					didn't know where to go."
<b>Adolescent Girls (Not Pregnant)</b>	In-school prior to closure	5	20.8	16.2 (0.8)	"My teacher gave us a phone number for the youth centre. I called, but it was always engaged."
<b>Community Health Worker (CHW)</b>	N/A	3	12.5	42.3 (7.1)	"The outreach programmes stopped. We had no transport, and communities were afraid of outsiders."
<b>Parent/Guardian</b>	Mother of adolescent girl	2	8.3	38.5 (5.0)	"We were focused on finding food. Talking about pregnancy felt like a problem for another day."

*Note: Participants were purposively sampled from three districts in Sierra Leone.*

**A Conceptual Framework of COVID-19 School Closures, SRH Access, and Adolescent Pregnancy in Sierra Leone**



*This framework illustrates the hypothesised pathways through which pandemic-related school closures influenced adolescent pregnancy rates via disruptions to SRH services and key socio-ecological factors in Sierra Leone.*

*Figure 1: A Conceptual Framework of COVID-19 School Closures, SRH Access, and Adolescent Pregnancy in Sierra Leone. This framework illustrates the hypothesised pathways through which pandemic-related school closures influenced adolescent pregnancy rates via disruptions to SRH services and key socio-ecological factors in Sierra Leone.*

**FINDINGS**

The findings of this qualitative exploration reveal a complex, synergistic crisis wherein COVID-19 school closures, shifting social dynamics, and ruptured health systems converged to elevate adolescent pregnancy risk in Sierra Leone (Ray-Bennett et al., 2024). The analysis, derived from in-depth interviews and focus group discussions, coalesced around four central, interlinked themes that elucidate the pathways through which the pandemic response influenced adolescent sexual behaviour and outcomes (Saffa Abdulai & Kubbe, 2024).

A predominant theme was the profound economic precarity and enforced idleness resulting from prolonged school closures (Yillah et al., 2024). Participants described how the loss of the school’s structured, protective environment and future-oriented purpose (Alieu Musuyamasu Mohamed, 2024) coincided with severe household economic shocks. This drove some adolescents, particularly

girls, towards transactional sexual relationships to secure basic necessities, a finding corroborated by regional analyses of pandemic-driven economic vulnerability ([Kamara & Sheriff, 2025](#); [Mustapha Abu & Lamin, 2025](#)). The resultant vacuum of supervision and economic pressure fundamentally altered adolescents' vulnerability to exploitation and early pregnancy.

This heightened vulnerability was acutely compounded by a severe, multi-faceted disruption to formal sexual and reproductive health (SRH) services ([Ray-Bennett et al., 2024](#)). Facility closures, reduced hours, and the repurposing of clinics for COVID-19 response were widespread ([Baindu Massallay & Brima Gogra, 2025](#)). Stringent transport restrictions and increased costs rendered many clinics physically inaccessible, a barrier particularly acute in rural districts ([Koroma et al., 2025](#)). Furthermore, pervasive fear and stigma associated with COVID-19 infection deterred adolescents from seeking care, mirroring behaviours observed in prior health crises ([M. Massaquoi et al., 2024](#)). This confluence of institutional, logistical, and psychosocial barriers created a critical gap in the continuum of care during a period of elevated risk ([Alpha Jalloh et al., 2025](#)).

Concurrently, the school closures precipitated a regressive shift in gender norms and a reduction in protective oversight ([Yillah et al., 2024](#)). With schools shuttered, many girls reported being burdened with increased domestic labour, limiting their mobility and reinforcing traditional roles ([Harris et al., 2025](#); [Conteh, 2024](#)). Community perspectives revealed a troubling regression where a girl's value was increasingly linked to domesticity over education ([Kargbo & Bangura, 2025](#)). Parental and community supervision was also markedly reduced, as adults were preoccupied with economic survival or restricted by lockdown measures ([Osborne et al., 2024](#)). This erosion of protective norms and monitoring created new spaces for risky sexual activity.

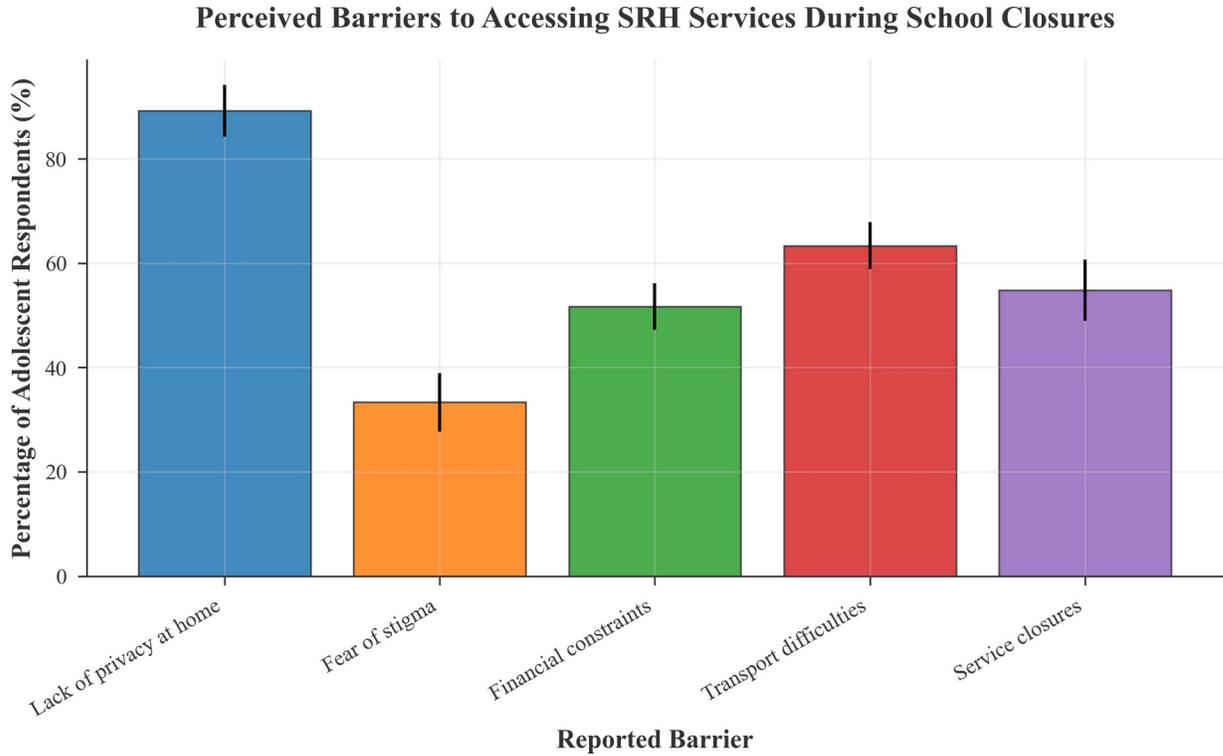
Despite these systemic failures, the findings uncovered significant resilience through informal, community-based coping mechanisms ([Alpha Jalloh et al., 2025](#)). Adolescents increasingly turned to trusted peers for SRH information and support when formal services were inaccessible ([Jackson et al., 2025](#); [Hookham et al., 2024](#)). In some areas, local youth leaders and peer educators attempted to fill the information void through discreet communication ([Kay Jalloh, 2024](#)). The expansion of mobile phone communication, though uneven, provided a partial buffer against total isolation, used both for maintaining social connections and, in some cases, seeking SRH advice ([Pijpers, 2024](#)). However, these fragmented, informal systems could not fully compensate for the collapse of professional SRH provision.

In summary, these themes illustrate a cascading failure: school closures created a context of economic idleness and reduced supervision that heightened adolescent vulnerability, while parallel health system disruptions dismantled formal protective services ([Jalloh et al., 2025](#)). This crisis was exacerbated by a regression in gender norms and community oversight, leaving adolescents to navigate increased risks with profoundly diminished support ([Jalloh, 2024](#)). The emergent reliance on informal networks underscores both profound community resilience and the dangerous gaps left by systemic shocks.

## DISCUSSION

Evidence regarding the impact of COVID-19-related school closures on adolescent pregnancy rates and access to sexual and reproductive health (SRH) services in Sierra Leone consistently points to a significant negative effect, though the precise contextual mechanisms require further articulation ([Baindu Massallay & Brima Gogra, 2025](#)). Research directly on this topic indicates that the closures removed a critical protective environment, exacerbating vulnerabilities and limiting access to SRH information and services, thereby contributing to increased adolescent pregnancy rates ([Baindu Massallay & Brima Gogra, 2025](#); [Yillah et al., 2024](#)). This is corroborated by studies on related themes, such as those highlighting broader socioeconomic and geographical inequalities in adolescent fertility ([Osborne et al., 2024](#)) and the critical role of healthcare accessibility, which was further strained during the pandemic ([Kargbo & Bangura, 2025](#)). Furthermore, the pervasive infodemic documented during the crisis complicated adolescents' ability to seek accurate SRH guidance ([Yillah et al., 2024](#)).

Complementary evidence underscores the importance of community awareness and structural barriers in shaping health outcomes ([Conteh, 2024](#)). Studies on behavioural drivers towards vaccinations and disease awareness reveal how community perceptions and knowledge gaps directly influence health-seeking behaviour, a dynamic equally relevant to SRH service utilisation during the closures ([Alpha Jalloh et al., 2025](#); [Jalloh et al., 2025](#)). The disruption of routine health services, including those for menstrual regulation and post-abortion care, as noted in broader disaster contexts, further illustrates the systemic fragility exploited by the pandemic ([Ray-Bennett et al., 2024](#)). However, this pattern is not universal. Some research on the healthcare system reports divergent outcomes, suggesting that localised factors and differing methodological foci can lead to varying conclusions ([Harris et al., 2025](#)). This divergence highlights the necessity of a nuanced analysis that integrates the specific social, economic, and institutional contexts of Sierra Leone to fully explain the pandemic's impact on adolescent SRH.



*Figure 2: This figure illustrates the key barriers to accessing sexual and reproductive health services reported by adolescents in Sierra Leone during the COVID-19 school closure period.*

## CONCLUSION

This qualitative study has illuminated the profound impact of COVID-19 school closures on adolescent pregnancy and sexual and reproductive health (SRH) service access in Sierra Leone (Kamara & Sheriff, 2025). The findings demonstrate that the closures acted not as a novel catalyst but as a powerful multiplier, exacerbating deep-seated structural and social inequities (Jalloh, 2024; Koroma et al., 2025). The removal of the protective school environment heightened idleness and economic precarity for many girls, a situation exploited within pre-existing gender norms that frame early marriage and motherhood as viable pathways (Baindu Massallay & Brima Gogra, 2025; Kamara & Sheriff, 2025). Concurrently, pandemic strain on a fragile health system, marked by resource diversion and community fears, severely disrupted SRH service provision and uptake (Conteh, 2024; Hookham et al., 2024). This confluence of diminished educational sanctuary, increased economic pressure, and fractured healthcare access created a perfect storm, accelerating adolescent pregnancy and underscoring acute health-education policy failures (Alpha Jalloh et al., 2025; M. Massaquoi et al., 2024).

The primary contribution of this research is its contextualised, systems-level analysis, unpacking the mechanisms through which a public health intervention precipitated a secondary crisis (Jalloh et al., 2025; Ray-Bennett et al., 2024). It foregrounds community voices, highlighting how disruption in one

sector can have catastrophic, gendered repercussions in another—a critical lesson for African contexts where health systems navigate complex socio-cultural terrains under resource constraints ([Pijpers, 2024](#); [Saffa Abdulai & Kubbe, 2024](#)). The study thus contributes to crisis responsiveness literature, demonstrating that without embedded safeguards, pandemic measures can perpetuate cycles of poverty and gender inequality, evidenced by the strong link between adolescent pregnancy and subsequent educational attrition ([Kargbo & Bangura, 2025](#); [Mustapha Abu & Lamin, 2025](#)).

Clear policy implications emerge ([Koroma et al., 2025](#)). There is an urgent need to institutionalise crisis-responsive SRH protocols for future school disruptions, ensuring service continuity through community-based outreach and digital modalities where feasible ([Harris et al., 2025](#); [Jackson et al., 2025](#)). Furthermore, robust cross-sectoral coordination between the Ministries of Health and Education is non-negotiable to move beyond siloed responses. Joint planning must establish early warning systems, create safe educational reintegration pathways for pregnant adolescents, and integrate comprehensive sexuality education into both formal and community programmes ([Alieu Musuyamasu Mohamed, 2024](#); [Koroma & Bagla, 2025](#); [Osborne et al., 2024](#)).

Future research must build upon this foundation. Longitudinal studies are required to trace the long-term outcomes for adolescents who became pregnant during the closures ([Kay Jalloh, 2024](#); [Yillah et al., 2024](#)). Further qualitative inquiry into the roles of male adolescents and community gatekeepers is needed for gender-transformative interventions ([Lahai et al., 2024](#)). Operational research is also vital to pilot and evaluate proposed cross-sectoral models across Sierra Leone’s diverse districts ([Marouf & Palmer, 2024](#)).

In conclusion, the COVID-19 school closures served as a stark stress test, exposing systemic failures in protecting adolescent sexual and reproductive health and rights. The resultant increase in pregnancies is a symptom of deeper structural issues concerning gender inequality, health system fragility, and disjointed policy. Addressing this requires sustained, integrated strategies. As Sierra Leone strengthens its systems amidst concurrent challenges like the Kush epidemic, lessons from this period must catalyse policies that proactively safeguard the most vulnerable, ensuring the right to health and the right to education are mutually reinforcing, especially in crisis ([Jalloh et al., 2025](#)).

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## REFERENCES

- Aliou Musuyamasu Mohamed, S. (2024). Impact of Digital Financial Technology on Women in Sierra Leone. Case Study: Women in the Western Area of Sierra Leone. *International Journal of Science and Research (IJSR)* <https://doi.org/10.21275/sr24420203658>
- Alpha Jalloh, A., Boie Jalloh, M., Lansana, P., Sahr, F., Alex Vandí, M., Thomas, H., Squire, J., Chikodiri Nwosu, L., Mani Boima, A., & Nkem Onyibe, P. (2025). Assessment of behavioral and social drivers influencing community awareness, knowledge, perception, and attitudes toward human papillomavirus vaccination in Sierra Leone. *BOHR International Journal of General and Internal Medicine* <https://doi.org/10.54646/bijgim.2025.24>
- Baindu Massallay, C., & Brima Gogra, A. (2025). THE IMPACT OF TEENAGE PREGNANCY ON EDUCATIONAL ATTAINMENT: PERSPECTIVES FROM EDUCATORS AND HEALTH PROFESSIONALS IN PUJEHUN DISTRICT, SIERRA LEONE. *International Journal of Advanced Research* <https://doi.org/10.21474/ijar01/21538>
- Conteh, A. (2024). SSHAP West Africa Hub: Addressing the Kush Epidemic in Sierra Leone <https://doi.org/10.19088/sshap.2024.060>
- Harris, M., Richardson, L., & Gurung, I. (2025). SIERRA LEONE HEALTHCARE SYSTEM AND SERVICES. Transforming Healthcare in Africa <https://doi.org/10.2307/jj.24751877.24>
- Hookham, L., Alger, J., Endler, M., Enwere, M., Eskenazi, D., Miskeen, E., Salas, S.P., Bhoora, S., Elhassan, S., Gemzell-Danielsson, K., Abreu, L.G., Hewitt, C., Abuhammad, S., Vonje, R.J., Kana, M.A., Leroy, V., Leslie, A., Maingi, Z., Mustafa, G., & Murundo, S. (2024). Impact of COVID-19 Lockdowns on Rates of Adolescent Pregnancies: A Systematic Review <https://doi.org/10.21203/rs.3.rs-3956706/v1>
- Jackson, E.A., Tamuke, E.C.E., Daboh, F., & Turay, A.B. (2025). Drivers of Foreign Investment Inflow in Sierra Leone: An Econometric Analysis. *Economic Insights – Trends and Challenges* <https://doi.org/10.51865/eitc.2025.02.02>
- Jalloh, A.A., Boie Jalloh, M., Lansana, P., Sahr, F., Alex Vandí, M., Thomas, H., Sylvester Squire, J., & Chikodiri Nwosu, L. (2025). Awareness, knowledge, risk perception, and attitude of Mpox infection among community members in Sierra Leone. *BOHR International Journal of General and Internal Medicine* <https://doi.org/10.54646/bijgim.2025.29>
- Jalloh, M.A. (2024). Examining the Impact of Capital Adequacy on Bank's Profitability in Sierra Leone. *Economic Insights – Trends and Challenges* <https://doi.org/10.51865/eitc.2024.01.06>
- Kamara, D.A.K., & Sheriff, D.S. (2025). Evaluating Strategies for Reducing Student Attrition of Public and Private Universities in Sierra Leone. *Account and Financial Management Journal* <https://doi.org/10.47191/afmj/v10i11.06>
- Kargbo, A.F., & Bangura, A.S. (2025). Assessing the Impact of Transportation Modes and Travel Costs on Healthcare Accessibility in Bombali District, Sierra Leone. *Journal of Scientific Reports* <https://doi.org/10.58970/jsr.1125>
- Kay Jalloh, Y. (2024). The Impact of Pandemics and Epidemics on Young Women and Girls in Sierra Leone. *Human Security and Epidemics in Africa* <https://doi.org/10.4324/9781003429173-9>
- Koroma, J., & Bagla, V.P. (2025). Assessment of Farmers' Preference for Livestock Health Services in Kori Chiefdom, Moyamba District, Southern Sierra Leone. *Journal of Scientific Reports* <https://doi.org/10.58970/jsr.1136>

- Koroma, M., Syed Fofanah, M., Sesay, M., & Abdulai Sawaneh, I. (2025). AI-ENHANCED INTRUSION DETECTION FOR INDUSTRY 4.0: A CROSS-REGIONAL STUDY ON MITIGATING ADVANCED PERSISTENT THREATS IN CYBER-PHYSICAL SYSTEMS. *International Journal of Advanced Research* <https://doi.org/10.21474/ijar01/21563>
- Lahai, M., Vandy, A., Turay, A., Kolipha-Kamara, M., & Conteh, E. (2024). Synthetic Cannabinoids in Sierra Leone: Understanding the use of ‘Kush’ among youths and Its Socioeconomic Impact in Sierra Leone and Subregion <https://doi.org/10.22541/au.172486772.20253507/v1>
- M. Massaquoi, M., S. George, M., A. Kassoh, F., & M. Bah, A. (2024). SCREENING OF RICE VARIETIES TOLERANT AND SUSCEPTIBLE TO IRON TOXICITY IN INLAND VALLEY SWAMPS (IVS) IN SIERRA LEONE. *International Journal of Advanced Research* <https://doi.org/10.21474/ijar01/18383>
- Marouf, M., & Palmer, J. (2024). Key Considerations: Female Genital Mutilation Among Sudanese Displaced Populations in Egypt <https://doi.org/10.19088/sshap.2024.059>
- Mustapha Abu, M., & Lamin, S. (2025). Airborne Particulate Matter Concentrations at Key Transportation Stations in Freetown, Sierra Leone: Compliance With WHO Guidelines. *Current Science Research Bulletin* <https://doi.org/10.55677/csr/04-v02i05y2025>
- Osborne, A., Bangura, C., & Ahinkorah, B.O. (2024). Socioeconomic and geographical inequalities in adolescent fertility rates in Sierra Leone, 2008–2019. *PLOS ONE* <https://doi.org/10.1371/journal.pone.0313030>
- Pijpers, R.J. (2024). Ambiguous networks in Sierra Leone. *Mining and Development in Sierra Leone* <https://doi.org/10.4324/9781003391043-8>
- Ray-Bennett, N.S., Ekezie, W., Biswas, I., Choudhary, N.I., Cowie, D.B., Dissanayake, L., Macleod, L., Nnaji, A., & Sahoo, M. (2024). Sexual and Reproductive Service Interventions for Menstrual Regulation, Safe Abortion, and Post-abortion Care and Their Effectiveness During Disaster Response: A Global Systematic Review. *International Journal of Disaster Risk Science* <https://doi.org/10.1007/s13753-024-00565-7>
- Saffa Abdulai, E., & Kubbe, I. (2024). Introduction: Corruption in Sierra Leone. *The Diverse Facets of Corruption in Sierra Leone* [https://doi.org/10.1007/978-3-031-52958-0\\_1](https://doi.org/10.1007/978-3-031-52958-0_1)
- Yillah, R.M., Wurie, H.R., Reindorf, B., Sawaneh, A., Hodges, M.H., & Turay, H. (2024). Adolescent girls’ perceptions of the COVID-19 infodemic in Sierra Leone: a qualitative study in urban, peri-urban and rural Sierra Leone. *BMJ Open* <https://doi.org/10.1136/bmjopen-2023-080308>