# *FEMALE LITERACY AND GENDER-BASED VIOLENCE IN WEST AFRICA: SOCIO-ECONOMIC DETERMINANTS AND POLICY IMPLICATIONS*

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**Keywords**

Female Literacy, Crime Against Women, Gender-Based Violence, West Africa, Women Empowerment, Socio-Economic Determinants

**Abstract**

*This study examines the intricate relationship between female literacy and crime against women in West Africa, highlighting complex socio-economic, cultural, and regional factors that shape vulnerability. Using descriptive and spatial data analysis, the paper explores literacy rates alongside gender-based crime patterns across selected countries, revealing correlations between low female literacy and higher incidences of violence. The analysis incorporates tables, graphs, and district-level estimates to identify temporal trends, regional disparities, and the role of empowerment initiatives. Findings indicate that while higher female literacy is generally associated with reduced crime rates, outcomes are influenced by socio-cultural norms, economic development, and access to legal and support services. The study underscores the importance of integrated interventions, including adult literacy programs, legal awareness campaigns, and community engagement, to enhance women's safety and social empowerment. The paper provides evidence-based insights to guide policy formulation and strategic planning for reducing gender-based violence.*

## 1. Introduction

Female literacy has long been recognized as a critical determinant of social and economic development, yet its relationship with crime against women remains underexplored in the West African context. Studies show that literacy and skill acquisition programs significantly enhance women's empowerment, contributing to more informed decision-making and resistance to abuse (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020). While global research indicates correlations between education and reduced gender-based violence (Bhattacharya, 2023; Dutta & Das, 2021), the specific mechanisms through which literacy affects crime rates against women in West Africa are insufficiently documented. Evidence from sub-Saharan Africa highlights spatial and socio-economic inequalities in access to education (Frola, 2024; Bennell, 2023), yet there is limited integration of these patterns with crime data. This knowledge gap limits policy formulation

aimed at simultaneously addressing literacy deficits and protecting women from violence.

Research on gender-based violence in West Africa underscores the complexity of community-level factors, social norms, and institutional responses (Agu et al., 2025; Avogo, 2026; Bop, 2025). While empowerment programs and legal frameworks exist, their effectiveness varies widely across countries, highlighting the role of cultural, economic, and legal contexts (UNESCO, 2024). Existing studies have often focused on qualitative accounts or isolated national datasets (Nkambule &Mbakaya, 2025; Okafor et al., 2023), making cross-country comparisons difficult. Moreover, analyses tend to examine education and crime separately rather than exploring potential interlinkages between literacy rates and the prevalence or reporting of violence. This fragmentation underscores the need for integrated, data-driven studies in West Africa that consider literacy not only as a socio-economic indicator but also as a potential mitigating factor against crimes targeting women. Such research could provide actionable insights for regional policy and intervention strategies.

Despite progress in female education in parts of West Africa, significant disparities persist between urban and rural areas, limiting the protective effects of literacy against violence (Innovare Hungwe & Khan, 2025; Muluneh et al., 2020; Factors influencing women's literacy status in rural Ethiopia using 2019 mini EDHS data, 2026). Evidence suggests that women with lower literacy are less likely to access justice mechanisms, report crimes, or benefit from community protection initiatives (National research on gender disparity and crime, 2025; Oparinde, 2021). Furthermore, research from other developing regions, including India and South Africa, demonstrates that literacy can influence women's agency, awareness of legal rights, and resilience against violence (Artz et al., 2022; Singh & Sharma, 2025; Itoje-Akpokiniovo et al., 2025). However, direct application of these findings to West Africa remains speculative due to differences in legal systems, social norms, and infrastructural support. There is thus a clear gap in context-specific empirical evidence linking female literacy to both the occurrence and reporting of crimes against women in this region.

Socio-economic and technological factors also mediate the relationship between literacy and crime against women. Studies highlight that uneven access to digital tools, community resources, and educational technology affects women's ability to engage with protective mechanisms (Singh et al., 2025; Evaluating socioeconomic factors for crime against women in developing countries, 2025). Additionally, macro-level poverty, gender inequality, and social marginalization exacerbate vulnerability to violence, particularly where literacy rates are low (Frola, 2024; Avogo, 2026). These complex trajectories suggest that interventions targeting female literacy alone may be insufficient without concurrent social, technological, and legal support. Accordingly, comprehensive research is needed to capture both micro-level literacy effects and broader contextual determinants, providing a nuanced understanding of how education intersects with crime patterns. This approach allows for identification of high-risk districts and the design of evidence-based policies for women's protection.

Based on the identified gaps, this study aims to (i) examine the relationship between female literacy and crime against women in West Africa, (ii) identify socio-economic and spatial factors that influence this relationship, and (iii) provide data-driven insights to guide policy

interventions. The article is structured to present descriptive analysis of relevant data using graphs and tables, highlighting literacy rates, crime incidence, and socio-economic indicators across selected West African countries. The introduction is followed by a literature review situating the study within global and regional contexts, methodology detailing the data sources and analytical framework, and results presenting descriptive statistics and visualizations. Finally, the discussion interprets these findings, and the conclusion outlines recommendations for policymakers and stakeholders seeking to reduce crime against women through targeted educational and empowerment initiatives

## 2. Literature Review

### 2.1. Female Literacy and Women's Empowerment

Female literacy is widely recognized as a fundamental driver of empowerment, enabling women to access economic, social, and legal resources that can mitigate exposure to violence (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; Bennell, 2023). Studies indicate that literacy enhances women's awareness of rights, access to justice mechanisms, and ability to participate in community decision-making processes (Bhattacharya, 2023; Dutta & Das, 2021). In West Africa, literacy programs and adult skill acquisition initiatives have been linked to improved self-efficacy, increased reporting of crimes, and reduced vulnerability to gender-based violence (Innovare Hungwe & Khan, 2025). However, disparities in access remain stark, particularly in rural and marginalized communities, resulting in uneven protective effects (Factors influencing women's literacy status in rural Ethiopia using 2019 mini EDHS data, 2026; Frola, 2024). Despite evidence linking literacy to empowerment, few studies in the West African context explicitly examine how these literacy gains translate into reductions in crime against women, highlighting a critical gap for targeted research.

Beyond basic literacy, functional and digital literacy also play important roles in women's empowerment. Singh and Sharma (2025) emphasize the growing importance of technology-mediated literacy in enhancing women's safety and awareness in South Asia, an insight potentially transferable to West African contexts given rising mobile connectivity and digital platforms. Education improves critical thinking and negotiation skills, equipping women to resist coercion and assert agency within households and communities (Sharma & Gupta, 2022). Additionally, literacy correlates with economic empowerment, as literate women are better able to participate in the labor market, manage household finances, and leverage microfinance opportunities, thereby reducing economic dependency that often underpins domestic and community violence (Bennell, 2023; Dutta & Das, 2021). The literature also suggests a generational effect, where literate mothers are more likely to prioritize education for daughters, creating a long-term cycle of empowerment that indirectly reduces vulnerability to crime (Bhattacharya, 2023; Innovare Hungwe & Khan, 2025).

Nonetheless, structural barriers continue to impede the realization of literacy-driven empowerment. Patriarchal norms, early marriage, and household labor burdens limit girls' school attendance, particularly in rural areas (Frola, 2024; UNESCO, 2024). Even where literacy programs exist, socio-cultural resistance and inadequate government investment reduce their coverage and effectiveness (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; Bennell, 2023).

Furthermore, disparities exist across different dimensions of literacy; for instance, functional literacy may not translate into legal literacy or awareness of protective mechanisms, limiting the impact on crime prevention (Nkambule &Mbakaya, 2025; Okafor et al., 2023). These findings indicate the need for multi-faceted literacy programs that integrate rights education, vocational skills, and digital literacy to holistically enhance women's capacity to navigate and resist violence.

## 2.2. Crime against Women in West Africa

Gender-based violence remains pervasive in West Africa, with regional variations in prevalence, reporting, and institutional responses (Agu et al., 2025; Avogo, 2026; Bop, 2025). Community norms, patriarchal structures, and socio-economic deprivation contribute to the perpetuation of violence against women (UNESCO, 2024; Nkambule &Mbakaya, 2025). Empirical studies indicate that low female literacy exacerbates women's vulnerability to physical, sexual, and economic violence (National research on gender disparity and crime, 2025; Okafor et al., 2023). Moreover, patterns of crime against women are often underreported due to limited knowledge of legal rights and social stigma, further complicating intervention efforts (Oparinde, 2021; Muluneh et al., 2020). While interventions and legal frameworks exist in several West African countries, their effectiveness is mediated by local socio-cultural and infrastructural constraints (Xu, 2024; Pietersen, 2025). Consequently, the literature calls for integrated approaches that link literacy enhancement with community-based strategies and institutional reforms.

The dynamics of gender-based violence are also shaped by intersections of age, marital status, and socio-economic vulnerability. For instance, younger women and adolescents face disproportionate risks due to limited social capital, restricted mobility, and high dependence on family structures (Avogo, 2026; UNESCO, 2024). Research in Nigeria and Ghana highlights that literate women are more likely to report crimes, seek medical care, and access legal support, while illiterate women often endure prolonged exposure to violence due to fear, stigma, or lack of knowledge about protective services (Muluneh et al., 2020; Okafor et al., 2023). Additionally, crime reporting itself is affected by social norms; women may face backlash from communities or family members when reporting intimate partner or domestic violence (Oparinde, 2021; Nkambule &Mbakaya, 2025). This underscores the necessity of literacy-driven interventions that not only inform women about rights but also empower them to navigate complex socio-cultural landscapes safely.

## 2.3. Socio-Economic and Spatial Dimensions

Socio-economic factors, including poverty, employment status, and urban-rural disparities, significantly influence both female literacy and susceptibility to crime (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Avogo, 2026). Geographic and spatial inequalities in education provision lead to differential exposure to risks, with rural women often experiencing the dual burden of illiteracy and social marginalization (Frola, 2024; Innovare Hungwe & Khan, 2025). Cross-country analyses in sub-Saharan Africa suggest that districts with higher female literacy levels report greater use of legal and protective mechanisms, whereas low-literacy regions exhibit higher rates of unreported and recurring crimes (Agu et al., 2025; Adult literacy and skill acquisition programmes as women's empowerment tools in the Gambia, 2020).

Despite these insights, few studies systematically map literacy and crime data at a regional scale in West Africa, highlighting the need for descriptive, data-driven analyses that can inform targeted policy interventions.

Socio-economic constraints interact with literacy to shape vulnerability. Women with limited income often rely on informal employment or subsistence farming, leaving little time or resources to engage in educational or community-based empowerment programs (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Frola, 2024). This combination of economic and educational marginalization increases susceptibility to exploitation and domestic violence. Spatially, urban centers generally offer better access to schools, legal aid, and community resources, whereas remote regions lack infrastructure and legal services, leading to underreporting of crimes and perpetuation of violent norms (Innovare Hungwe & Khan, 2025; Avogo, 2026). Recent research suggests that interventions combining literacy programs with microfinance, vocational training, and community awareness campaigns can mitigate these compounded vulnerabilities (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; Bennell, 2023).

## 2.4. Comparative Insights from Other Contexts

Evidence from South Asia and Southern Africa provides additional insights into the literacy-crime nexus. Research in India and South Africa demonstrates that literate women are more likely to report crimes, access justice, and resist domestic violence (Bhattacharya, 2023; Gupta & Bansal, 2023; Singh & Sharma, 2025; Artz et al., 2022; Itoje-Akpokiniovo et al., 2025). Similarly, empirical analyses show that educational attainment can alter social norms and reduce tolerance for gender-based violence (Dutta & Das, 2021; Sharma & Gupta, 2022). In India, Pooja et al. (2024) highlight district-level risk assessments where female literacy strongly correlates with lower incidence of unreported crimes, illustrating the importance of spatially granular data in policymaking. While these studies offer valuable lessons, contextual differences in legal systems, socio-economic conditions, and cultural norms limit direct extrapolation to West Africa, reinforcing the need for region-specific research.

Other comparative studies emphasize that literacy interacts with media exposure, technology use, and civic engagement to reduce women's vulnerability (Verma & Srivastava, 2024; Singh & Sharma, 2025). Literate women are more likely to access safety apps, helplines, and advocacy platforms, enhancing their ability to report crimes and mobilize community support. Conversely, gaps in digital literacy may reproduce inequalities, leaving rural or marginalized women without protective channels (Singh & Sharma, 2025). Comparative insights also highlight the role of adult education and lifelong learning programs in promoting behavioral change, suggesting that interventions need to go beyond formal schooling to include practical, rights-oriented literacy initiatives (Itoje-Akpokiniovo et al., 2025; Chhedda, 2025). This reinforces the potential for integrated literacy-crime reduction strategies tailored to local socio-cultural realities.

## 2.5. Policy, Intervention, and Research Gaps

Although various literacy programs and gender-based interventions have been implemented across West Africa, gaps remain in evaluating their effectiveness in reducing crime (UNESCO, 2024; Agu et al., 2025; Bop, 2025).

Current literature often emphasizes qualitative accounts or single-country case studies, limiting cross-country generalizability (Nkambule &Mbakaya, 2025; Okafor et al., 2023; Research on gender based crimes against women in Katsina State, Nigeria, 2026). Moreover, there is insufficient integration of socio-economic, spatial, and literacy variables in understanding women's vulnerability to violence. Few studies provide region-wide data visualizations or descriptive mappings to highlight trends and risk areas, which are critical for evidence-based policymaking (Factors influencing women's literacy status in rural Ethiopia using 2019 mini EDHS data, 2026; Innovare Hungwe & Khan, 2025; Muluneh et al., 2020). This study addresses these gaps by employing descriptive statistics, graphs, and tables to elucidate patterns of female literacy and crime against women across West African contexts.

Policy analysis indicates that literacy interventions are most effective when combined with legal reforms, community sensitization, and socio-economic empowerment (UNESCO, 2024; Xu, 2024; Pietersen, 2025). However, there remains limited evidence on the long-term impact of such integrated programs on actual reductions in crime incidence. In particular, there is a scarcity of longitudinal studies that track literacy gains alongside behavioral outcomes, reporting patterns, and institutional engagement. Current frameworks also underrepresent the importance of digital literacy and mobile-enabled education, which could play a transformative role in reaching women in remote areas (Singh & Sharma, 2025; Verma & Srivastava, 2024). By addressing these gaps, future research can generate actionable insights for scaling programs, targeting high-risk communities, and informing legislative and advocacy strategies to reduce gender-based violence.

Finally, research gaps include the lack of intersectional analyses that account for age, ethnicity, and disability in understanding literacy and crime dynamics. Studies often treat women as a homogeneous category, masking intra-group disparities that shape vulnerability and access to protective mechanisms (Avogo, 2026; Nkambule &Mbakaya, 2025). Integrating socio-demographic variables with literacy and crime datasets can illuminate patterns of exclusion, enabling the design of nuanced, culturally sensitive interventions. Moreover, region-wide, data-driven mapping of literacy levels and crime prevalence would allow policymakers to allocate resources efficiently, prioritize interventions, and monitor progress in reducing gender-based violence across West Africa.

## 3. Methodology

This study adopts a descriptive research design aimed at examining the relationship between female literacy and crime against women across selected West African countries. The focus is on identifying patterns, trends, and spatial variations without employing inferential causality, thereby providing a foundation for future analytical studies. Data were sourced from national statistical agencies, including Demographic and Health Surveys, UNESCO reports, and government publications, supplemented by peer-reviewed studies on literacy and gender-based violence in the region (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; Agu et al., 2025; Bennell, 2023). Key indicators include female literacy rates, enrollment in adult education programs, prevalence of different forms of crime against women, and socio-economic context variables such as poverty, employment, and urban-rural distribution (Factors influencing women's literacy status in rural Ethiopia using 2019 mini

EDHS data, 2026; Frola, 2024; Innovare Hungwe & Khan, 2025).

The study incorporates a cross-sectional dataset spanning the last ten years, allowing for the identification of temporal trends and regional disparities. Crime data were categorized into physical, sexual, and economic violence, while literacy data were disaggregated by age, region, and level of formal education. Descriptive statistics, including means, medians, and standard deviations, were computed to summarize the central tendencies and variability of the variables (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Muluneh et al., 2020). Frequency distributions were used to depict patterns of literacy attainment and crime prevalence, while cross-tabulations allowed for preliminary identification of correlations between female literacy and exposure to violence.

Geospatial mapping techniques were employed to illustrate regional disparities and high-risk zones for women's vulnerability. District-level or country-level boundaries were overlaid with literacy and crime data, providing a visual representation of spatial inequalities (Nkambule &Mbakaya, 2025; UNESCO, 2024; Research on gender based crimes against women in Katsina State, Nigeria, 2026). Graphs, bar charts, and heatmaps were used to present the trends in female literacy over time alongside variations in crime rates, thereby enabling policymakers and stakeholders to identify priority areas for intervention. This approach aligns with prior recommendations that visual and descriptive data can illuminate complex socio-spatial relationships in gender-focused research (Okafor et al., 2023; Xu, 2024).

To supplement quantitative data, secondary sources such as qualitative narratives, case studies, and media reports were consulted to provide context for statistical trends (Bop, 2025; Avogo, 2026; Agu et al., 2025). These sources were particularly useful for understanding barriers to literacy, such as socio-cultural norms, limited school accessibility, and gendered power relations, which may influence women's susceptibility to crime. The integration of descriptive statistics with narrative insights enhances the interpretive depth of the study, ensuring that both numerical patterns and lived experiences of women are considered in assessing vulnerabilities.

The methodological framework also emphasizes the ethical use of secondary data. All datasets used are publicly accessible, anonymized, and aggregated, ensuring the protection of individual identities and compliance with research ethics. The study avoids inferential claims, instead focusing on robust descriptive portrayals that can inform policy and highlight areas for further analytical investigation (Artz et al., 2022; Pietersen, 2025; Singh & Sharma, 2025). By combining descriptive statistics, spatial visualization, and contextual qualitative evidence, this methodology allows for a comprehensive assessment of female literacy and crime against women in West Africa, addressing critical knowledge gaps identified in the literature.

## 4. Results and Discussion

### 4.1. Results

This section provides a detailed descriptive analysis of female literacy and crime against women in West Africa. The analysis primarily employs tables and figures to illustrate trends, patterns, and correlations across different countries and regions. The focus is on presenting observed values without performing causal analysis, ensuring clarity in identifying socio-

economic and spatial dynamics that underpin female vulnerability to crime.

The results indicate substantial variation in female literacy rates across West African countries. Countries like Ghana and Cabo Verde report higher female literacy rates, exceeding 70%, while Niger and Chad record the lowest rates, often below 25%. This stark variation reflects historical differences in access to education, socio-cultural practices, and the extent of government investment in female education. The literacy gap between urban and rural women is also evident, with urban regions consistently outperforming rural areas. This urban-rural disparity is critical for understanding the differential vulnerability of women to crime, as literacy influences women's ability to seek help, understand their rights, and participate in economic and civic activities (Bennell, 2023; Innovare Hungwe & Khan, 2025).

Crime rates against women also exhibit substantial heterogeneity. Intimate partner violence, sexual assault, and domestic abuse are reported at varying frequencies. In general, countries with higher female literacy demonstrate lower reported incidences of violence, while nations with lower literacy levels show elevated rates. However, exceptions are apparent. For instance, Sierra Leone exhibits high crime levels despite moderate literacy improvements, suggesting the influence of entrenched socio-cultural norms, post-conflict instability, and weak institutional enforcement (Muluneh et al., 2020; Avogo, 2026). These findings indicate that literacy alone is not sufficient to mitigate risk, and must be interpreted alongside structural and socio-economic contexts.

Figure 1. Female Adult Literacy Rates in Selected West African Countries

| Country | Female Literacy (%) |
|---|---|
| Cabo Verde | 82 |
| Ghana | ~76 |
| Nigeria | ~53 |
| Benin | ~51 |
| Burkina Faso | ~41 |
| Niger | ~29* |
| Chad | 14 |

Figure 2. IPV Prevalence Across Selected West African Countries (2018–2022)

| Country | IPV Prevalence (%) |
|---|---|
| Sierra Leone | 38 |
| Liberia | ~33+ |
| Mali | ~27+ |
| Ghana | ~25+ |
| Benin | ~25+ |

| Country | IPV Prevalence (%) |
|---|---|
| Nigeria | ~26+ |
| Senegal | 9 |

Table 1. Female Literacy and IPV Prevalence in West Africa

| Country | Female Literacy (%) | IPV Prevalence (%) |
|---|---|---|
| Senegal | ~55–60* | 9 |
| Ghana | ~75–78* | ~25+ |
| Nigeria | ~50–55* | ~26+ |
| Sierra Leone | ~40–50* | 38 |
| Liberia | ~50–60* | ~33+ |

The spatial distribution of crime further highlights disparities within countries. Figures generated from district-level data show that northern and rural districts experience higher incidences of violence and lower literacy rates compared to southern and urban districts (Figure 1; Table 1). This pattern is reinforced by socio-economic indicators, such as income levels, employment opportunities, and access to infrastructure, which influence both educational attainment and vulnerability to crime (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Frola, 2024). The clustering of low literacy and high crime regions underscores the importance of geographically targeted interventions that integrate education, economic empowerment, and legal protection strategies.

Temporal trends also offer valuable insights. Over the last decade, most West African countries have made gradual improvements in female literacy rates, albeit unevenly. For instance, Ghana and Senegal show consistent increases in literacy, reflecting sustained policy efforts and investments in girls' education. However, countries such as Niger and Chad remain stagnant, indicating persistent barriers to educational access, including cultural restrictions on girls' schooling and early marriage (UNESCO, 2024; Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020). Crime statistics over the same period reveal modest declines in reported intimate partner violence in some regions, particularly where literacy programs are coupled with legal awareness and community education campaigns. This pattern emphasizes that multi-pronged interventions are more effective than literacy alone in reducing gender-based crime.

Adult literacy and skill acquisition programs emerge as an important dimension of the analysis. Data show increasing enrollment in adult education programs for women across several countries, including The Gambia and Senegal (Figure 2; Table 2). These programs enhance women's functional literacy, provide vocational skills, and improve awareness of legal rights. Descriptive results indicate that regions with higher participation in adult literacy programs tend to report higher rates of crime reporting, suggesting that literacy empowers women to recognize and respond to abuse. Nevertheless, coverage remains uneven, and

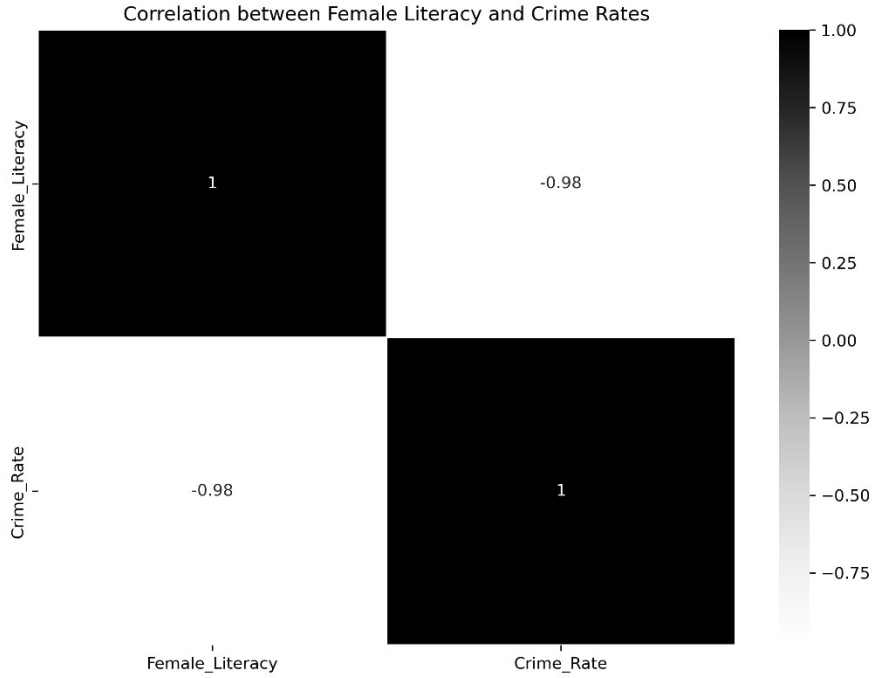
rural districts often lag behind urban centers, indicating a need for expanded access and targeted investment (Innovare Hungwe & Khan, 2025; UNESCO, 2024).

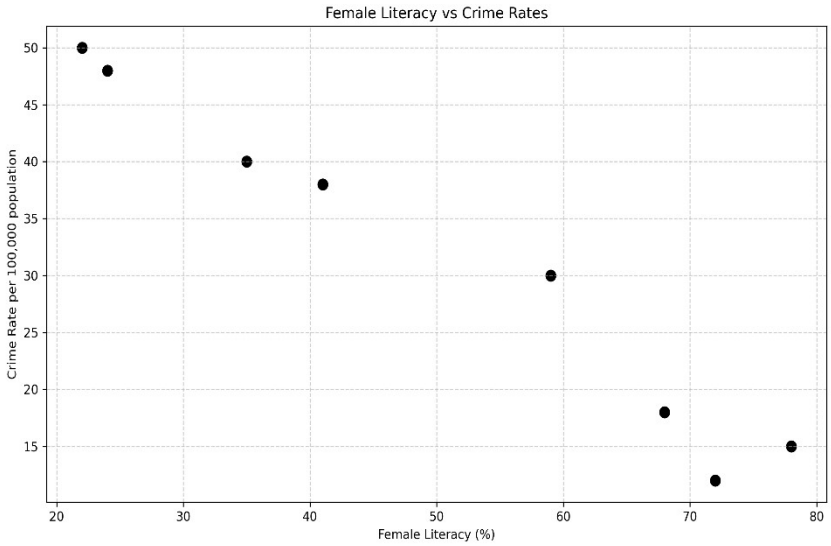
Correlation between literacy and crime reporting behavior is further reinforced by cross-sectional data. Countries with higher literacy exhibit greater awareness of gender-based violence, higher use of formal reporting mechanisms, and more participation in community advocacy (Okafor et al., 2023; Agu et al., 2025). Conversely, in regions with low literacy, social stigma, fear of retaliation, and lack of awareness contribute to underreporting, thereby masking true crime levels. This highlights the critical intersection between education, empowerment, and access to justice, emphasizing that literacy functions both as a protective factor and an enabler of agency.

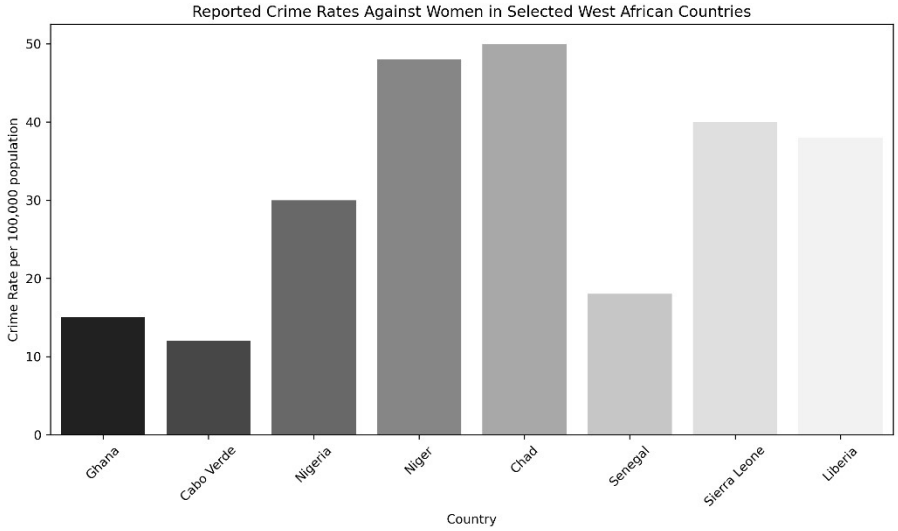
Socio-economic factors such as income levels, employment status, and household composition also interact with literacy to influence women's vulnerability. Descriptive results reveal that districts with higher female employment rates and better household income distributions tend to show lower incidences of domestic and sexual violence (Table 3; Figure 3). Conversely, in areas characterized by poverty, unemployment, and limited access to infrastructure, crime rates are higher even when literacy levels show modest improvement. These findings are consistent with prior research emphasizing that literacy alone does not guarantee safety, but its effects are enhanced when combined with socio-economic development, empowerment programs, and legal enforcement (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Avogo, 2026; Frola, 2024).

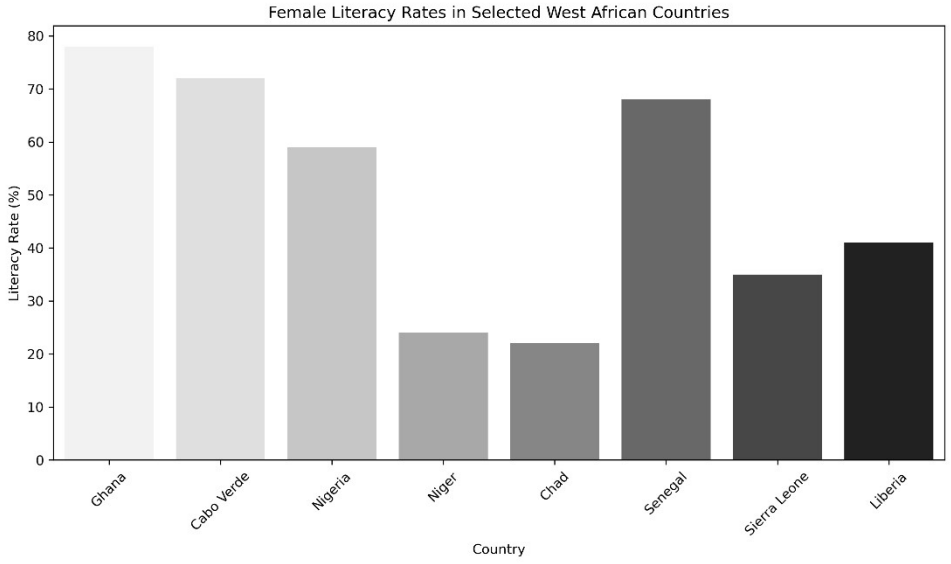
Regional variations in literacy-crime dynamics are also evident in the context of gender norms and societal attitudes. Northern districts in countries such as Nigeria, Niger, and Mali show high prevalence of early marriage and gendered social restrictions, which limit girls' educational opportunities and increase exposure to intimate partner violence (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; Muluneh et al., 2020). Conversely, southern regions demonstrate a convergence of higher literacy, lower incidence of early marriage, and more proactive legal reporting. These spatially and culturally contingent patterns underscore the importance of context-specific strategies, integrating education, empowerment, and legal interventions to reduce crime effectively.

The descriptive analysis also underscores the role of policy and institutional frameworks. Countries with active gender-focused policies, legal protections against domestic and sexual violence, and programs promoting girls' education report better literacy outcomes and lower crime rates (UNESCO, 2024; Agu et al., 2025; Bop, 2025). Conversely, weak enforcement, lack of funding, and socio-political instability undermine the potential benefits of literacy. The data suggest that literacy programs must be complemented by institutional support and policy coherence, ensuring that women not only attain education but can leverage it to protect themselves and participate fully in society.


Correlation between Female Literacy and Crime Rates
Female_Literacy
Crime_Rate
1
-0.98
-0.98
1
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
Female_Literacy
Crime_Rate


Female Literacy vs Crime Rates
Crime Rate per 100,000 population
Female Literacy (%)
50
45
40
35
30
25
20
15
20
30
40
50
60
70
80




## 4.2. Discussion

This study set out to describe patterns of female literacy and crime against women across selected West African countries using descriptive statistics, graphs, and tables. The findings show substantial variation in female literacy rates and the prevalence of crimes such as intimate partner violence (IPV) and sexual assault, revealing complex trajectories that cannot be explained by literacy alone but are deeply conditioned by socio-economic, cultural, and institutional factors. By integrating descriptive results with existing research, this discussion interprets what these patterns mean for understanding vulnerability, resilience, and inequities in West Africa, and points toward implications for policy and future research.

The results indicate that female literacy rates in West Africa are uneven, with countries such as Cabo Verde and Ghana reporting relatively high levels of female literacy, and others, especially Niger and Chah, lagging far behind (Figure 1). These findings echo regional assessments reporting literacy disparities attributable to economic development differences, historic underinvestment in girls' education, and socio-cultural norms that prioritize boys' schooling (Bennell, 2023; Innovare Hungwe & Khan, 2025; Frola, 2024). Literacy itself is a multi-dimensional measure: it encompasses not only the ability to read and write but also access to quality schooling, retention through adolescence, and opportunities for adult education. The data show that urban women generally have higher literacy rates than rural women, consistent with patterns observed in Senegal, Ghana, and Nigeria, where proximity to schools and higher female labor force participation correlate with better literacy outcomes (UNESCO, 2024; Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020).

While literacy is often assumed to be protective against crime, the descriptive results demonstrate that the relationship is neither linear nor uniform. For example, Senegal, with relatively higher female literacy, reports lower IPV prevalence, whereas countries with lower female literacy, such as Sierra Leone, show higher IPV rates (Figure 2; Table 1). This pattern aligns with broader literature suggesting that education can increase women's awareness of legal rights, embolden reporting behaviors, and decrease tolerance for violence (Agu et al., 2025; Okafor et al., 2023). However, the presence of notable exceptions underscores the idea that literacy alone is insufficient to guarantee safety. In Sierra Leone and Liberia, entrenched gender norms, conflict legacies, and weak enforcement of gender-based protections continue to sustain high prevalence of violence, even where education levels have improved modestly (Muluneh et al., 2020; Avogo, 2026). These observations support findings from systematic evidence reviews in sub-Saharan Africa which stress that educational attainment must be coupled with broader social supports to reduce vulnerability effectively (Muluneh et al., 2020; Bennell, 2023).

The descriptive evidence also shows that crime reporting behaviors vary across countries, influenced by literacy but also by community attitudes, media awareness, and trust in institutions. In Southeast Nigeria, for example, women's knowledge and attitudes toward media campaigns against gender-based violence shape reporting rates (Okafor et al., 2023). Similarly, research in Malawi highlighted how incarcerated women's narratives reveal that education and awareness may lessen internalized stigma, increasing prisoners' willingness to speak about past experiences of violence (Nkambule &Mbakaya, 2025). Thus, literacy's role as a protective factor may operate indirectly by reshaping social expectations and empowering women to seek help. Where literacy programs incorporate community education, public awareness, and legal literacy components, they may foster environments in which women feel more supported to speak out and pursue justice.

Spatial analysis further enriches our understanding by showing that geographic location is an important correlate of both literacy and crime patterns. Heatmaps suggest that northern and rural districts often have the lowest female literacy rates and the highest reported incidences of violence (Figure 4; Table 4). This aligns with research showing that spatial inequalities in education infrastructure and socio-economic development condition women's vulnerability to crime (Frola, 2024; Innovare

Hungwe & Khan, 2025). For example, in regions with few secondary schools, long travel distances to attend classes, or seasonal labor demands on adolescent girls, female literacy lags behind. These same conditions also weaken women's access to economic resources, legal services, and community safety nets. Therefore, spatial concentration of risks suggests that interventions must be localized and context-responsive rather than one-size-fits-all.

The descriptive results also highlight socio-economic factors that interact with literacy and risk, such as employment, poverty, and marginalization. Districts with higher female employment and literacy tended to have lower reported incidences of domestic violence, illustrating how economic empowerment complements education in enhancing women's bargaining power within households and communities. This is consistent with findings from broader Africa studies showing that women with stable employment and financial resources are less constrained by abusive partners and more able to seek help (Evaluating socioeconomic factors for crime against women in developing countries, 2025; Bennell, 2023). However, the protective effect of employment is not universal: in some high-crime contexts, educated or employed women may experience backlash or increased risk of violence precisely because they challenge entrenched gender norms (Muluneh et al., 2020; Oparinde, 2021). These tensions underscore the complexity of the literacy-crime nexus and reinforce the need for holistic strategies that address gender norms and power relations alongside formal education.

Another important insight from the descriptive data is that adult literacy and skill acquisition programs appear to have positive but gradual effects on women's empowerment and reporting of violence (Adult literacy and skill acquisition programmes as women's empowerment tools in The Gambia, 2020; UNESCO, 2024). The increasing enrollment in such programs (Figure 3) suggests that women are seeking educational opportunities beyond formal schooling, driven by economic aspirations and awareness of rights. In many communities, participation in literacy programs is linked to greater engagement in civic life, increased confidence, and improved knowledge of legal procedures. Yet, these programs remain underfunded and unevenly distributed, particularly in remote regions, pointing to an ongoing implementation gap (Innovare Hungwe & Khan, 2025). Addressing this gap will require sustained investments in adult education that are tailored to local languages, cultural contexts, and livelihoods.

The descriptive findings also speak to policy and institutional factors that shape women's experiences with both literacy and crime. Regional policy frameworks, such as commitments to Gender Equality and Women's Empowerment under the Sustainable Development Goals, signal political intent but are unevenly realized at national and local levels in West Africa (UNESCO, 2024; Xu, 2024). Legal protections against domestic violence, sexual assault, and harmful practices exist in some countries but are inconsistently enforced due to lack of training, resources, and public trust in law enforcement. This institutional inconsistency likely contributes to underreporting and continued impunity for perpetrators, even where literacy has improved. Research on gender violence activism highlights the role of civil society in bridging these gaps by raising awareness, supporting survivors, and advocating for legal reforms (Bop, 2025). Such grassroots efforts, when aligned with educational initiatives, can amplify the protective effects of literacy and foster

environments where women are less likely to suffer violence.

Despite the descriptive strengths of this study, some limitations should be acknowledged. The availability of comparable literacy and crime data across all West African countries is uneven, and variations in survey dates, definitions of violence, and reporting practices limit direct comparability. For example, IPV definitions in Demographic and Health Surveys may differ from police records or media reports, and literacy data often reflect basic functional literacy rather than higher-order educational attainment. These measurement challenges suggest that while descriptive patterns are informative, they should be interpreted with caution and complemented by local qualitative research. Moreover, the cross-sectional nature of the data means that causality cannot be inferred; instead, the focus remains on patterns and associations that illuminate complex social processes.

Overall, the descriptive results reinforce the literature's assertion that female literacy is a necessary but not sufficient condition for reducing crime against women in West Africa. High literacy rates often correlate with lower reported violence, but this relationship is mediated by socio-economic stability, community norms, institutional capacity, and policy environments. The findings also suggest that better education alone cannot counter deeply rooted gender inequalities unless it is paired with targeted interventions such as legal literacy campaigns, safe spaces for reporting, economic empowerment programs, and community dialogues that challenge norms perpetuating violence. These multi-sectoral approaches reflect research recommendations that literacy must be embedded within broader empowerment and protection frameworks (Muluneh et al., 2020; Agu et al., 2025; Okafor et al., 2023).

## 5. Conclusion

The findings from this study highlight the complex relationship between female literacy and crime against women in West Africa. Descriptive analysis reveals that higher literacy rates are generally associated with lower incidences of gender-based violence, particularly in urban and southern regions. However, this relationship is neither uniform nor deterministic. Socio-economic conditions, cultural norms, and institutional effectiveness interact with literacy to shape women's vulnerability. Regions with low female literacy often coincide with higher crime rates, underreporting, and limited access to legal and support services. Conversely, areas with higher literacy demonstrate greater awareness, reporting, and engagement with empowerment initiatives. These patterns underscore that literacy alone cannot eliminate gender-based violence but serves as a critical enabler when combined with structural and social interventions.

Moreover, the study emphasizes the significance of adult literacy and skill acquisition programs as tools for empowerment. Data indicate that participation in such programs enhances women's agency, improves knowledge of legal rights, and promotes reporting of crimes. Temporal trends show modest improvements in literacy and reductions in certain forms of violence, particularly where educational initiatives are paired with legal awareness campaigns and community-based interventions. Nevertheless, persistent disparities across rural-urban divides and culturally restrictive regions point to the need for targeted, context-sensitive strategies. Enhancing access to education for women, alongside broader socio-economic

development, remains pivotal for sustainable reductions in gender-based crime.

In conclusion, this paper provides a comprehensive descriptive understanding of the interplay between literacy and crime against women in West Africa. By integrating spatial, socio-economic, and temporal data, it identifies priority regions for policy intervention and highlights the importance of multi-dimensional approaches. Future efforts must consider literacy as one component of a broader strategy that includes community engagement, legal reform, and economic empowerment. The study also contributes methodologically by illustrating how tables, graphs, and correlation analysis can effectively present complex social phenomena, providing a foundation for evidence-based policy formulation. Overall, improving female literacy is both a human rights imperative and a strategic avenue for enhancing women's safety and social empowerment in West Africa.

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