


COMMENTARY

Reflections on the relevance of updated, standardised, and reliable data on sexual and gender-based violence for research and policymaking for eradication, response, and prevention in Sierra Leone

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Abstract

Sexual and gender-based violence (SGBV) is a multifaceted, endemic, and nefarious phenomenon that remains poorly measured and understood, despite greater global awareness of the issue. While efforts to improve data collection methods have increased—including the implementation of the Demographic and Health Survey (DHS) in some countries—the lack of reliable SGBV data remains a significant challenge to developing targeted policy interventions and advocacy initiatives. Using a recent mixed-methods research project conducted by the authors in Sierra Leone as a case study, this paper discusses the current status of SGBV data, challenges faced, and potential research approaches.

Policy Significance Statement

Responding to sexual and gender-based violence (SGBV) is critical to safeguarding women's human rights and achieving the SDGs—across the 17 goals, but specifically for Goal 5 on gender equality and empowerment. The availability of open, updated, standardised, and reliable data is an urgent need for advancing gender equality. Subsequently, gender data are key to better understand the different types of GBV and contribute to the design, implementation, and evaluation of public policies. This document reflects on the scope and limitations of using traditional data to measure factors impacting SGBV in Sierra Leone. The objectives are to address challenges in data access and processing, examine data quality and governance, and discuss the next steps to improve SGBV prevention and responses.

1. Introduction

Sexual and gender-based violence (SGBV) is a global public health issue and human rights violation that affects and threatens the lives of individuals and groups, especially women and girls, and hinders human progress, including towards the Sustainable Development Goals (SDGs). SGBV is defined as “any act that is perpetrated against a person’s will ... [and] based on gender norms and unequal power relationships” (UNHCR, 2022), including acts of sexual, physical, psychological, mental, and emotional abuse. We use the term SGBV instead of the traditional gender-based violence (GBV) to emphasise the specific problem of sexual violence in the context of Sierra Leone. Furthermore, we focus on “SGBV against women” because they are most frequently affected, and the available data sources, such as surveys aimed at measuring the extent of sexual violence, primarily centre on women and girls.

Collecting and analysing SGBV data is key to understanding the current state of violence, common patterns, and drivers, as well as the consequences for the survivors. It is also vital when designing, implementing, and evaluating evidence-based policies and interventions. Target 2 of SDG 5 (gender equality and empowerment of all women and girls) aims to “eliminate all forms of violence against all women and girls in public and private spheres, including trafficking and sexual and other types of exploitation” (SDSN n.d.) by 2030.

Despite the importance of data for evidence-informed public dialogue and decisions, most countries lack high-quality and robust data. First, even when data collection is frequent enough to enable comparisons over time, available data are not always representative of the different groups of women, locations, and population identities (e.g. socioeconomic status, marital status, sexual orientation, religion, ethnicity, disability, etc.). Second, existing data are not granular enough to provide community-level insights. Finally, due to the sensitivity of SGBV and the fear of reporting, data collected by traditional surveys can underestimate the prevalence and contain biases against social groups.

The Demographic and Health Survey (DHS) data show that SGBV has increased in Sierra Leone over the past years (StatsSL & ICF, 2020). The DHS carried out in 2019 offers the most comprehensive and representative data available on SGBV in the country. To our knowledge, the most recent survey on SGBV is the “2021 Gender-Based Violence Survey for the Republic of Sierra Leone,” which was produced by Statistics Sierra Leone, with UNDP serving as an implementing partner. However, this survey included a much smaller sample and fewer indicators covered, thus lacking representativity and limiting the possibility of comparability with the DHS data.

This context prompts the discussion of gender-inclusive data to advance SGBV research, while also highlighting important gaps that impede the formulation of targeted policies and responses. The goal of this article is to discuss the status quo of SGBV data, its importance for policymaking, and the challenges faced during collection and analysis. To illustrate this global challenge, we use our recent experience in conducting a mixed-methods research project in Sierra Leone, which identified the drivers correlated with an increased likelihood of a woman or girl experiencing SGBV, as well as undergoing female genital mutilation (FGM) and seeking help behaviour (Letouzé et al., 2022; the complete study that this

Box 1. *Sex-Disaggregated Data versus Gender Data.*

The distinctions between sex-disaggregated data and gender data have a direct impact on the depth of information obtained and the types of analysis that can be inferred from each type of data. Sex-disaggregated data are categorised according to the binary classification of male and female, and by itself, this breakdown is inadequate for it to qualify as gender data. Conversely, gender data are acquired and assessed with a foundation in comprehending the societal disparities between women and men, considering gender construction and the resultant forms of oppression. There are two types of indicators: sensitive to and responsive regarding gender. The first tracks the status (and roles) of women and men in society over time and therefore measures whether any progress has been made towards gender equality. The second specifically measures equal participation and the equitable distribution of benefits with respect to gender, thus going a step beyond simply describing the state of gender-relevant variables (European Institute for Gender Equality n.d.; Murray 2019).

paper refers to can be accessed at <https://datapopalliance.org/wp-content/uploads/2022/07/Digital-P077-Report-Sierra-Leone.pdf>). This study, presented as a case study in this article, was conducted by the authors (Data-Pop Alliance), commissioned by the UNDP Sierra Leone Country Office, Rainbo Initiative, and Statistics Sierra Leone.

The remainder of this article is divided into the following sections: the second section highlights the various uses and importance of SGBV data for policymaking, the current status of gender data, the importance of the DHS, and the main data source for SGBV data. The third section delves into the case study of the research project conducted by the authors in Sierra Leone. The section starts with a background of GBV in Sierra Leone, followed by the description of the qualitative and quantitative component of the study, and a summary of the findings, as well as the limitations of the data sources used. The fourth section discusses missed opportunities for data-driven policymaking and the challenges faced with this type of data. The last section concludes the article.

2. SGBV data

2.1. Uses, importance, and implications for policymaking

The nature and scope of SGBV data are diverse. Ideally, data on prevalence and other SGBV-related data would be disaggregated by sex, race, age, ethnicity, and relationship between the perpetrator and survivor, and also be measured systematically over time (UN Women, 2010). However, this level of disaggregation remains a challenge due to the lack of a gender perspective in the data collection process, insufficient data storage, data privacy concerns, lack of skilled facilitators with sensitised training, financial constraints, as well as the lack of similarity among different data sources which hinders a continuous comparison of SGBV across time and space. Moreover, non-traditional data approaches have the potential to expand GBV/SGBV narratives, by helping uncover unnoticed risk factors, patterns and behaviours associated with SGBV in specific spatiotemporal frameworks (Anstiss & Patten, 2022).

On a global scale, documenting the prevalence and the underreporting of SGBV cases remains a major challenge in the process of data collection and availability. For example, although previous research has indicated that nearly 66% of ever-partnered women aged 15 years and older in the region of Central and sub-Saharan Africa have experienced physical and/or sexual violence in their lifetimes, “the magnitude of [S]GBV, especially in situations of civil conflict or contexts with poor health care, legal, and social infrastructure, remains unknown” (Palermo et al. 2014, p. 602). Underreporting reduces the reliability of the data. The impacts of underreporting are not only seen in terms of gaps in accurate data but also because it impedes the full understanding of the phenomenon and thus the implementation of effective public policies. As highlighted by Palermo et al., “individuals who report or disclose [S]GBV may systematically differ from those who do not,” and therefore “the latter group may remain unreached by services and support if programs have been designed on the basis of characteristics of the former” (ibid).

In addition to underreporting, improper documentation of cases and the lack of resources to track and investigate these cases also contribute to SGBV data gaps and lack of public awareness around the issue. These barriers also hinder policies aimed at preventing SGBV (UNFPA 2013). When coupled with the normalisation of SGBV as a private matter to be dealt with within families and communities (Perrin et al. 2019), the lack of awareness can make it even more difficult to mobilise support for policy change. Therefore, the lack of consistent and effective collection and dissemination of data can perpetuate the existing structural and traditional perceptions that SGBV is a matter to be “kept quiet.”

Comparing the prevalence and practices of SGBV across different countries is a challenging task due to the absence of standardised questioning in surveys and conceptual discrepancies in defining what constitutes SGBV. Additionally, the lack of SGBV data may reinforce governments’ low prioritisation of the issue, as resources are often limited in the context of emerging economies (Joint Consortium on

Gender-based Violence 2009). In tandem with lack of awareness, this scenario may lead to less political attention and resource distribution to tackle SGBV.

2.2. Current status of gender data and the importance of the DHS for SGBV research

National statistical offices (NSOs), non-traditional data generators, or repository institutions face significant challenges in collecting both sex- and gender-disaggregated data. According to a 2011 global survey conducted by the United Nations Statistics Division (UNSD), out of 126 countries surveyed, only 30–40% regularly produced sex-disaggregated data in various areas such as informal employment, unpaid employment, entrepreneurship, agriculture, violence against women (VAW), access to safe drinking water and/or sanitation, and technology (UNSC, 2012; the survey covered countries in ECA [Economic Commission for Africa]; ECE [Economic Commission for Europe]; ESCAP [Economic and Social Commission for Asia and the Pacific]; ESCWA [Economic and Social Commission for Western Asia]; and ECLAC [Economic Commission for Latin America and the Caribbean]). In recent years, there has been significant progress in available data to measure SDG 5.2.1 on eliminating VAW. For instance, most available data are from 2000 to 2018 (WHO 2019). The UN Women VAWG Data Hub (see more information about his database at: <https://data.unwomen.org/data-portal>), the WHO's gender and health surveys and OECD's Gender Data Portal (see more information about this database at: <https://www.oecd.org/gender/data/>), among others contributed to increased data availability. Despite improvements, surveys and other data collection instruments are too often gender-blind. They are not designed to capture the intricacy of the social phenomena that surround populations and how they specifically affect other groups of women with intersecting vulnerabilities (e.g. older women and women with disabilities). Available data on sexual violence by non-intimate partners and emerging forms of violence such as tech-facilitated GBV are still challenging.

These weaknesses go beyond the institutions themselves, as a change in data collection methods requires substantial reforms in policies, regulations, operating manuals, survey design, and so forth. Multilateral agencies and international partners have been pivotal in filling this gap that exists in most governments' capacity to collect and facilitate SGBV data in the Global South. For example, the United Nations Population Fund (UNFPA) compiles and makes available different data sources through two important geographical dashboards on intimate partner violence and FGM, and they also developed an original survey on the prevalence of VAW and provided specialised training for local practitioners on data collection on the Asia-Pacific region (also known as kNowVAWdata). The World Health Organization (WHO) also compiles data on the prevalence of VAW, using and providing access to both original and non-original sources. Several countries in Africa have benefited from particular studies, such as the "Multi-Country Study on Women's Health and Domestic Violence Against Women" (Garcia-Moreno et al. 2006). Finally, UN Women also compiles data on FGM and other harmful practices, compiling and displaying the data collected by the DHS and UNICEF's "Multiple Indicators Cluster Survey." Yet, despite the aforementioned international efforts to collect and make data available, the DHS remains the main (or the only) data source for documenting SGBV in most countries of sub-Saharan Africa, such as the case of Sierra Leone.

The DHS has been instrumental in collecting and disseminating population-based survey data, including sociodemographic, economic, health, and nutrition trends worldwide, playing an important role in contexts where NSOs lack the resources to conduct large-scale national household surveys (the programme was created in 1984 by the United States Agency for International Development [USAID] and has since assisted the implementation of over 320 household and facility-based surveys in 90 countries across Asia, Africa, Latin America/Caribbean. and Eastern Europe; USAID 2022). The DHS has contributed significantly to bridging data gaps on indicators related to empowerment, education, and sexual and reproductive health (DHS Program n.d.). Conducted approximately every 5 years in countries of interest, the surveys allow an analysis of the progress of gender equality, providing a useful resource for the design, implementation, and evaluation of

initiatives (Boerma and Sommerfelt 1993) and for the enhancement of data-driven decision-making (Nolan et al. 2017).

The DHS alone is not sufficient to capture all aspects of SGBV within a country. For example, although the DHS collects extensive information on underlying socioeconomic and cultural factors associated with the prevalence of SGBV (e.g. age group, religion, ethnicity, literacy rates, employment, contraceptive knowledge and use, informed choice, HIV knowledge and discriminatory attitudes towards people living with HIV, as well as attitudes towards wife-beating), indicators related to institutional/societal dimensions that have equal influence on the incidence and perpetuation of SGBV are poorly captured and documented (e.g. corruption, trust in national political systems, perceptions on the institutional capacity to assist victims of GBV and prosecute perpetrators, access to public support services, discrimination against LGBTQIA+ groups, discriminatory attitudes towards survivors of SGBV, etc.). Furthermore, the DHS does not document other intersectional factors that also influence women's capabilities to leave abusive relationships (e.g. unpaid domestic work, disabilities, and awareness about sexual and reproductive health and rights, among others). Yet, the DHS remains one of the most comprehensive databases for gender data, especially in the Global South.

3. Case study: Capturing the socioeconomic and cultural drivers of SGBV in Sierra Leone

3.1. *The state of SGBV in Sierra Leone*

In February 2019, Sierra Leone's President Julius Maada Bio declared SGBV a "national emergency." This came after the country recorded over 8500 cases of sexual assault in 2018—a 100% increase compared to 2017 (BBC News 2019)—with the vast majority involving female survivors. While several factors have contributed to this increase, at its root, SGBV in Sierra Leone has complex socioeconomic and cultural causes which disproportionately affect women and girls. These root causes predate Sierra Leone's civil war in the late 20th century, although the conflict dramatically increased cases of abuse (in 1991, for example, both rebel and government forces were accused of weaponising women's bodies by holding them captive in sexual servitude; Human Rights Watch 2003). An entire generation was raised amid intense and normalised violence, intensified by extreme poverty, traditional cultural norms and patriarchal practices, impunity for perpetrators, and lack of institutional trust. The prevalence of abuse against women and girls in Sierra Leone makes it one of the most dangerous places on earth to be a woman (Letouzé et al. 2022).

In recent years, researchers and policymakers have made efforts to better understand the types and magnitude of problems that SGBV creates for women and girls in Sierra Leone. In 2007, the International Alert and the Irish Aid provided one of the first evidence-based mappings of the challenges and responses implemented to address and mitigate SGBV in the country. The study found that "inaccurate and insufficient information about the nature and extent of GBV, especially sexual violence, impedes efforts to address it effectively" (Barnes et al. 2007, p. 37). SGBV data are essential to responding to and preventing this epidemic from continuing to impact the lives of women and girls in Sierra Leone.

The authors used a mixed-methods approach to investigate the factors associated with SGBV in Sierra Leone, leading to targeted policy recommendations aimed at addressing and preventing this phenomenon. This methodology fulfilled the main objective of the study in the face of insufficient data, which will be described in Section 4. The qualitative and quantitative methodology carried out and the findings are described below.

3.2. *Qualitative study*

The objective of the collection and analysis of qualitative data was to provide contextual grounding and to complement the insights gained through the quantitative analysis. To identify the key drivers of SGBV, the authors started with a review of grey and academic literature, including international and national legal frameworks. This work enabled the identification of trends, patterns, and social dynamics of SGBV in

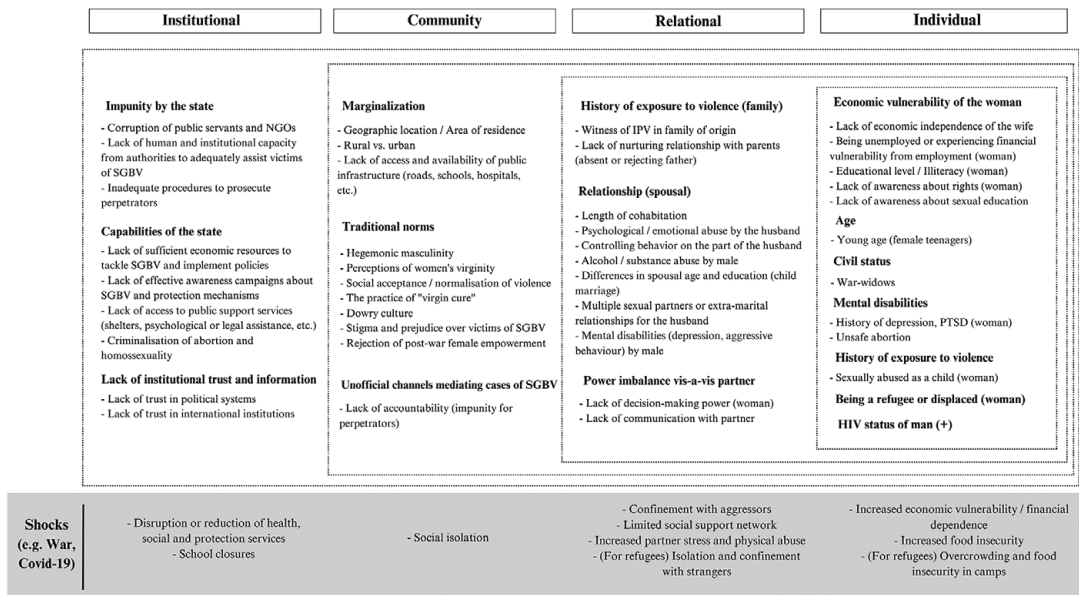


Figure 1. Ecological model: Widespread SGBV across all population subgroups, aggravated by socio-economic and cultural drivers. Source: Produced by the authors.

Sierra Leone, particularly during and after the country’s civil war (1991–2002). Finally, the literature review identified gaps in the institutional, policy, and legislative frameworks in responding to and preventing SGBV in the country, as well as the challenges faced by women and girls in accessing support services. The authors also identified SGBV data gaps and limitations of the different data sources consulted.

Based on the literature review, a multifaceted ecological model (Figure 1) was developed to classify the multiple and complex drivers influencing the prevalence of SGBV in Sierra Leone. The model contains four levels of analysis (institutional, community, relationship, and individual) and a shock-related transversal level (e.g. Covid-19, Ebola), which exacerbates existing vulnerability factors.

The qualitative research included two focus group discussions: one with civil society members supporting survivors and another with representatives addressing the institutional and legal aspects of SGBV in Sierra Leone. In addition, the authors conducted five in-depth, semi-structured interviews with SGBV survivors. The Rainbo Initiative, a Sierra Leonean NGO dedicated to ending SGBV and providing free services to survivors, conducted the interviews to ensure compliance with ethical principles and cultural contexts, including confidentiality and privacy safeguards. Additionally, the authors created ethical guidelines to be followed during interviews drawing on the recommendations provided in the “Ethical and safety recommendations for intervention research on violence against women” (WHO 2016) and “Conducting safe, effective and ethical Interviews with survivors of Sexual and Gender-Based Violence” (Witness 2013). Verbal and written consent protocols were also shared with participants to guarantee that they were fully aware and in agreement with the purpose of their participation.

3.3. Quantitative study

The quantitative study aimed to identify the drivers (or proxies for these drivers, considering that not all drivers identified in the literature review can be collected in statistical surveys) increasing the likelihood of a woman or girl suffering SGBV, seeking help and undergoing FGM in Sierra Leone. The differential and most innovative aspect of this study leans on the integration of machine learning algorithms with traditional statistical methods to predict which specific indicators (previously mapped in the qualitative

exercise) from the DHS database influence the possibility of a woman experiencing SGBV in Sierra Leone. The quantitative study was divided into two distinct stages.

First, the authors mapped national and international databases to identify the key indicators and proxies related to the political, cultural and socioeconomic context of Sierra Leone, cataloguing the indicators with guidance from the ecological model and elaborating a descriptive analysis of these indicators. Among the datasets used are DHS and the 2021 Gender-Based Violence Survey for the Republic of Sierra Leone, as previously mentioned. Three outcome variables from the 2019 Sierra Leone DHS Survey were selected: prevalence of physical and sexual violence; attitudes and approaches to help-seeking (among women who have experienced physical or sexual violence); and prevalence of girls and women who have undergone FGM/genital cutting.

The first part of the quantitative methodology consisted of two levels of filtering the indicators. The first step involved filtering in the indicators that were statistically dependent using Pearson’s chi-squared independent test (chi-square value less than 0.05). The second filtering step involved creating and employing a random forest classification model—a machine learning algorithm that generates multiple decision trees and combines their outputs to make predictions. This model was used to assess the association of each indicator (such as level of education, marital status, occupation, etc.) with the three outcome variables. In the second step of indicator selection, the criteria were determined by choosing indicators that surpassed the average relevance value among those that successfully passed Pearson’s chi-squared test. Here, relevance denotes the statistical contribution of the indicator in predicting the outcome variable.

This two-step method facilitated the identification of statistically independent indicators with high predictive relevance for the prevalence of SGBV, help-seeking behaviour, and the prevalence of women who have undergone FGM. In this process, more than half of the initially chosen indicators from DHS were excluded, retaining only those deemed relevant to the next stage.

The second part of the quantitative methodology involved using logistic regressions to analyse the positive or negative correlations between various categories within the indicators filtered in the previous stage and three different binary outcomes: prevalence of SGBV, seeking help, and undergoing FGM. Figure 2 summarises the indicators identified in the initial stage, which were subsequently employed as independent variables for the respective models. Finally, the authors compared the results of the logistic regression with the primary qualitative data collected and the current literature. This comparison aimed to confirm or contrast the main drivers influencing SGBV and to highlight any data gaps or information still needed to reach a conclusion.

Indicator	Ecological Model Dimension	Model I - SGBV	Model II - Help-seeking	Model III - FGM
Educational level	Individual	✓	✓	✓
Age at First Marriage	Individual	✓	✓	
Literacy	Individual	✓	✓	✓
Demand for Family Planning	Individual	✓	✓	
Age group	Individual	✓	✓	✓
Religion	Individual	✓	✓	✓
Ethnicity	Individual	✓	✓	✓
Discriminatory Attitudes towards people living with HIV	Community	✓	✓	
Number of lifetime partners	Individual	✓	✓	✓
Residence (urban or rural)	Individual	✓		✓
Mass Media Exposure and Internet Usage	Individual	✓		✓
Province	Individual	✓	✓	✓
Age at First Sexual Intercourse	Individual	✓		✓
Attitudes towards Female Circumcision	Community	✓	✓	✓
Attitudes toward wife beating	Community	✓	✓	
Occupation	Individual	✓	✓	
Sanitation	Community	✓	✓	
Self-reporting of Sexually Transmitted Infections	Individual		✓	
Ownership of assets	Individual		✓	
HIV/AIDS Knowledge, Transmission, and Prevention Methods	Community			✓
Worked in last year	Individual			✓
Marital status	Individual			✓

Figure 2. Summary of indicators used as independent variables in the logistic regression analysis for SGBV, help-seeking, and FGM outcomes.

3.4. Findings

In all three models, the logistic regression results suggest that both individual and community dimensions were associated with an increased probability of women experiencing SGBV, as well as a higher likelihood of women seeking help and undergoing FGM. Indicators from Figure 2 that are not discussed in the following paragraphs were statistically insignificant.

SGBV prevalence. The province of residency in Sierra Leone emerged as the most significant indicator positively correlated with SGBV prevalence. Specifically, women and girls from the Eastern province are more likely to experience or have experienced SGBV compared to those in other provinces, when all other variables were held constant. Women from the Southern provinces appear to be slightly more susceptible to SGBV. In parallel, two ethnic groups were less susceptible to SGBV, a trend that might be linked to their geographical regions.

The second most important indicator is the presence of discriminatory attitudes towards people living with HIV. This may be tied to patriarchal beliefs and societal norms which, based on the literature and insights from the focus group discussions, are among the most influential factors exacerbating SGBV. Thus, women or girls displaying discriminatory attitudes towards individuals with HIV have a higher likelihood of having experienced SGBV compared to those who do not hold such attitudes. On the other hand, believing that wife-beating is never justified was associated with a lower SGBV prevalence. Evaluating behaviours and attitudes related to gender issues is complex, and the measure of attitudes towards HIV and wife-beating should be compared with other social norms metrics for both men and women, which are not available for Sierra Leone.

Additionally, young women aged 15–34 years and those residing in rural areas are more susceptible to SGBV. Contrary to the conventional belief that access to information could prevent SGBV, the model suggests that extensive mass media exposure may increase the likelihood of suffering SGBV. Focus group discussions conducted revealed that unsupervised internet usage, exposing individuals to age-inappropriate content, may contribute to the development of aggressive and hypersexualised behaviours. These behaviours, in turn, are possibly linked to an increase in SGBV. However, the data on the emergence of technology-facilitated SGBV are insufficient to make definitive conclusions.

Help-seeking. The logistic regression results, with help-seeking behaviour as the dependent variable, show once again that individual and community dimensions play a crucial role in predicting the likelihood of women seeking help if they suffer from any form of SGBV. Among the indicators examined, the most important indicator correlated with not seeking help is also the province of residence, specifically North Western and Northern provinces. The second relevant indicator associated with help-seeking behaviour is asset ownership. In line with the literature, owning land or a house increases the likelihood of seeking help among SGBV victims.

Moreover, being between the ages of 35 and 39 increases the probability of seeking help. This finding complements the results of the first model, indicating that young women are more prone to experiencing physical and sexual violence but less likely to seek assistance. While age is correlated with asset ownership, which could explain the relationship, there's still a significant data gap regarding why women do not seek help. The underlying causes, especially those rooted in both formal and informal institutional constraints, as well as societal pressure, can be further explored through mixed-methods data collection.

Contrary to traditional hypotheses, having no education or having only completed primary education increases the likelihood of seeking help. However, this finding may be confounded by the fact that the number of women in the sample (which also reflects the local reality) with higher education was much smaller than those without education. It is also possible that women with higher education may avoid seeking help to prevent exposure and stigmatisation, but again more data are needed to validate this hypothesis.

FGM prevalence. Finally, the logistic regression results, with FGM prevalence as the dependent variable, reveal that having the opinion that genital cutting should continue is linked to a greater likelihood of having undergone the practice in the past, typically at a young age. This indicates that women subjected to FGM are potentially more inclined to support its perpetuation, influenced by

factors such as ethnicity or belief systems. Similar to the trend observed in help-seeking behaviour, geographical location—specifically residence in the North Western and Northern regions, as well as coming from a rural area—correlates with an elevated prevalence of FGM. Individual religion does not appear to influence SGBV prevalence or help-seeking behaviour, as the indicator was found to be insignificant in the previous models. However, in Sierra Leone, Muslim women are more likely to undergo or have experienced FGM.

Lack of education heightens the likelihood of undergoing FGM, whereas the ability to read a complete sentence is associated with a decrease. These results are in line with the findings from the literature review and focus group discussions conducted, since girls who are educated and literate are more likely to read, be informed and understand about the permanent and long-term damage genital cutting can cause. Moreover, women between the ages of 15 and 24 showed a lower likelihood of having undergone FGM compared to those in other age groups, suggesting a decline in the practice's prevalence in Sierra Leone.

3.5. *Limitations of data sources to measure SGBV*

In light of the ecological model developed, which compiles essential indicators to be measured in order to offer a comprehensive overview of the institutional, individual, community, and relational drivers of SGBV, we identified several challenges during the research process. These limitations pertain not only to our research but also echo the broader challenges of data availability both in Sierra Leone and worldwide.

First, the majority of the analysis and findings are provided at a national level. The available data lack the necessary geographical granularity to delve into city or district-specific characteristics within each province and provide more targeted policies. However, even data at a local level might not capture nuances in localised informal governance structures. It remains uncertain whether the prevalence of SGBV and FGM, as well as help-seeking behaviours, diverges from the official divisions outlined by national geographic boundaries.

Second, another specific limitation of the Gender-Based Violence Survey in Sierra Leone is the high occurrence of “do not know” or missing answers, potentially affecting the reliability of the responses and increasing the risk of biased interpretations. For example, over 10% of women in rural areas did not know the definition of socioeconomic deprivation and therefore were unable to self-report if they were victims of this type of violence. Given the sensitivity of the topic, this result suggests that women might have felt afraid or unwilling to disclose their full experiences of SGBV during the survey, either out of fear of victimisation, retaliation, or breach of privacy, which has been documented in previous studies (Human Rights Watch 2003).

Third, neither survey includes sex-disaggregated data on experiences of violence in the context of war and conflict, especially on the differential impact on women during these shocks. This lack of information prevents us from further exploring and measuring war-related conflict indicators as a factor of SGBV beyond the literature review. The fourth gap is the inherent difficulty and challenge of measuring diverse aspects of social norms, such as attitudes towards hegemonic masculinity, and perceptions of women's virginity broken down by age, sexual orientation, and disability status.

Furthermore, if the DHS and the Gender-Based Violence Survey for the Republic of Sierra Leone had adopted similar methodological approaches, we would have been able to compare the results from each of these sources and increase the robustness of the findings. Moreover, the analysis of non-traditional data sources to enhance the results from representative survey data also adds value to SGBV research. Mobility data sources have been used to understand the impact of COVID-related mobility restrictions on GBV, seeking to improve future responses to health crises (Letouzé et al. 2020). However, in a context with low internet penetration and limited use of mobile devices such as Sierra Leone, collecting these types of data remains a challenge.

So far, few data sources have delved into the impact of the COVID-19 pandemic on SGBV. Similarly, additional efforts will be necessary to gauge the emergence of new types of SGBV, including technology-

facilitated violence targeting women. This underscores the importance of having frequent and comparable data to track evolving challenges and trends.

Finally, large samples and stable estimates from large-scale surveys such as the DHS “come at a cost,” considering that they require a large number of interviewers and the involvement of different organisations to collect and provide data that are nationally representative (Kishor 2005). This poses two challenges: first, the lack of necessary experience, training, and expertise of the teams to work with victims of such violence and to consider the gender dimensions that intersect with this type of analysis. Second, the use of methodologies designed in contexts of the Global North or based on parameters that do not match the reality of that territory leads to biased results and fragmented representation of some realities.

4. Conclusion

SGBV remains a complex and multifaceted problem in Sierra Leone, with rippling effects on the social, political and economic dimensions of the country. The research conducted by Data-Pop Alliance with support from the UNDP Sierra Leone Country Office and Statistics Sierra Leone enabled the comprehensive mapping, review and analysis of national and international databases that either directly measured the problem (SGBV prevalence), or factors associated with it at the individual, relational, community, institutional, and shock-related dimensions of the ecological model. Drawing from the findings and methodological limitations of the data sources used in this study, we outlined and discussed particular issues important for an accurate analysis of the results, such as inherent biases in data, which in turn reduce the validity of some of the findings. Although this is a common issue in the field of data for development, it is evident that some of the representativity issues, for example, could be solved if more resources were made available.

Significant effort has been made to collect SGBV data. However, given the previously mentioned limitations, further effort is needed, mainly to understand the prevalence of SGBV in more specific localities, as well as by age and other characteristics that may delineate minority and vulnerable groups. This would facilitate the creation of public policies adapted to the needs of each group and territory. New SGBV-related surveys should be conducted to cover topics such as the impacts of COVID-19 on women, the impacts of war on SGBV, children’s exposure to SGBV, and other aspects not addressed in previous surveys in terms of cultural norms, including hegemonic masculinity. In turn, this would enhance research results, and recommendations aimed at decision-makers and relevant stakeholders would therefore be much more accurate, targeted and effective.

Importantly, strict adherence to privacy and safeguarding measures is essential in such research endeavours. Ethical principles, if not respected, put the safety of women who have suffered SGBV at risk, such as the identification of survivors by perpetrators. This reinforces fear of exposure and abuse, discouraging survivors from reporting incidents of violence and accessing services. Developing an adequate data governance model underpinned by ethical principles for data collection, storage, management, and availability is key to advancing research in SGBV.

Data availability. The data that support the findings are available upon request in The World Bank, Demographic and Health Survey 2019 at <https://microdata.worldbank.org/index.php/catalog/3826>, with the permission of Statistics Sierra Leone.

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References

- Anstiss D and Patten S** (2022) Using big data to reduce violence against women and girls. Available at <https://www.ss8.com/using-big-data-to-reduce-violence-against-women-and-girls/> (accessed 27 September 2022).
- Barnes K, Albrecht P and Olson M** (2007) *Addressing Gender-Based Violence in Sierra Leone: Mapping Challenges, Responses and Future Entry Points*. London: International Alert.
- BBC News** (2019) Sierra Leone declares emergency over rape and sexual assault. Available at <https://www.bbc.com/news/world-africa-47169729> (accessed 27 September 2022).
- Boerma TJ and Sommerfelt A** (1993) Demographic and health surveys (DHS): Contributions and limitations. *World Health Statistics Quarterly* 46(4), 222–226.
- DHS Program** (n.d.) Description of the Demographic and Health Surveys Program. Available at https://dhsprogram.com/data/Guide-to-DHS-Statistics/Description_of_The_Demographic_and_Health_Surveys_ (accessed 27 September 2022).
- European Institute for Gender Equality** (n.d.) Gender statistics and indicators. Available at <https://eige.europa.eu/gender-mainstreaming/methods-tools/gender-statistics-indicators> (accessed 27 March 2023).
- Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L and Watts CH** (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *The Lancet* 368(9543), 1260–1269.
- Human Rights Watch** (2003) We'll kill you if you cry: Sexual violence in the Sierra Leone conflict. *New York*, 15(1). Available at <https://www.hrw.org/report/2003/01/16/well-kill-you-if-you-cry/sexual-violence-sierra-leone-conflict> (accessed 28 September 2022).
- Joint Consortium on Gender Based Violence** (2009) Keeping gender on the agenda: Gender based violence, poverty and development. Available at <https://www.gbv.ie/wp-content/uploads/2019/08/LB-4-Keeping-Gender-on-the-Agenda-GBV-Poverty-and-Development.pdf> (accessed 27 September 2022).
- Kishor S** (2005) Domestic violence measurement in the demographic and health surveys: The history and the challenges. *UN Division for the Advancement of Women*. Available at <https://www.un.org/womenwatch/daw/egm/vaw-stat-2005/docs/expert-papers/Kishor.pdf> (accessed 29 September 2022).
- Letouzé E, Yañez, I, Villar Z, Kruspel V and Cymorek M** (2020) Using data to shed light on the shadow pandemic of domestic violence in Mexico. *Giz Data Lab*. Available at <https://www.blog-datalab.com/home/using-data-to-shed-light-on-the-shadow-pandemic-of-domestic-violence-in-mexico/> (accessed 29 September 2022).
- Letouzé E, Spinardi A, et al.** (2022) Capturing the socioeconomic and cultural drivers of sexual and gender-based violence in Sierra Leone. *Data-Pop Alliance*. Available at <https://datapopalliance.org/wp-content/uploads/2022/07/Digital-P077-Report-Sierra-Leone.pdf> (accessed 27 September 2022).
- Murray U.** (2019) Gender responsive indicators: Gender and NDC planning for implementation. United Nations Development Programme (UNDP). Available at <https://www.ndcs.undp.org/content/ndc-support-programme/en/home/impact-and-learning/library/gender-responsive-indicators-gender-and-ndc-planning-for-implementation.html> (accessed 27 March 2023).
- Nolan L, Lucas R, Choi Y, Fabric M and Adetunji J** (2017) The contribution of demographic and health survey data to population and health policymaking: evidence from three developing countries. *African Population Studies* 31(1), 3395–3407. <https://doi.org/10.11564/31-1-998>.
- Palermo T, Bleck J and Peterman A** (2014) Tip of the iceberg: reporting and gender-based violence in developing countries. *American Journal of Epidemiology* 179(5), 602–612. <https://doi.org/10.1093/aje/kwt295>.
- Perrin N, Marsh M, Clough A, et al.** (2019) Social norms and beliefs about gender based violence scale: a measure for use with gender based violence prevention programs in low-resource and humanitarian settings. *Conflict and Health* 13(6), 1–12. <https://doi.org/10.1186/s13031-019-0189-x>.
- SDSN** (n.d.) Indicators and a monitoring framework. *Sustainable Development Solutions Network*. Available at <https://indicators.report/targets/5-2/> (accessed 28 September 2022).
- Statistics Sierra Leone (Stats SL) and ICF** (2020) Sierra Leone Demographic and Health Survey 2019. Freetown, Sierra Leone, and Rockville, Maryland, USA: Stats SL and ICF. Available at <https://www.dhsprogram.com/pubs/pdf/FR365/FR365.pdf> (accessed 27 September 2022).
- UNFPA** (2013) The role of data in addressing violence against women and girls. Available at https://unfpa.org/sites/default/files/resource-pdf/finalUNFPA_CSW_Book_20130221_Data.pdf (accessed 27 September 2022).
- UNHCR** (2022) Gender-based violence. Available at <https://www.unhcr.org/gender-based-violence.html> (accessed 27 September 2022).
- UNSC** (2012) Gender Statistics: Report of the Secretary General. Geneva. Available at <http://unstats.un.org/unsd/statcom/doc13/2013-10-GenderStats-E.pdf> (accessed 27 September 2022).
- UN Women** (2010) Data sources and collection. Available at <https://www.endvawnow.org/en/articles/171-data-sources-and-collection.html> (accessed 27 September 2022).
- USAID** (2022) The Demographic and Health Surveys Program. Available at <https://www.usaid.gov/what-we-do/global-health/cross-cutting-areas/demographic-and-health-surveys-program> (accessed 27 September 2022).
- Witness** (2013) Conducting safe, effective and ethical Interviews with survivors of sexual and gender-based violence. Available at <https://library.witness.org/product/guide-to-interviewing-survivors-of-sexual-and-gender-based-violence/> (accessed 21 September 2022).

World Health Organization (WHO) (2016) Ethical and safety recommendations for intervention research on violence against women. Available at <http://apps.who.int/iris/bitstream/handle/10665/251759/9789241510189-eng.pdf?sequence=1> (accessed 25 September 2022).

World Health Organization (WHO) (2019) The Global Health Observatory: Proportion of ever-partnered women and girls aged 15-49 years subjected to physical and/or sexual violence by a current or former intimate partner in the previous 12 months. Available at <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/proportion-of-ever-partnered-women-and-girls-aged-15-49-years-subjected-to-physical-and-or-sexual-violence-by-a-current-or-former-intimate-partner-in-the-previous-12-months> (accessed 25 September 2022).

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