



# Dual Epidemics: Intimate Partner Violence and HIV in Sub-Saharan African Women

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## Introduction

Socio-cultural practices and norms that promote violence such as rape, spousal abuse, and domestic violence significantly increase the probability of HIV infection among women. The intersection of gender-based violence and infectious disease transmission represents one of the most pressing public health challenges of our time, particularly in resource-limited settings where both epidemics flourish. Intimate Partner Violence (IPV), encompassing physical violence (throwing objects, slapping, punching, weapon threats, kicking, dragging, strangling, hair pulling), emotional violence (insults, humiliation, threats, intimidation, economic control), and sexual violence (forced sex, unwanted sexual acts, reproductive coercion), is a critical public health concern gaining global attention [1-4]. These forms of violence often co-occur and create cumulative trauma that extends far beyond the immediate physical injuries, affecting women's mental health, economic stability, and overall quality of life.

The pervasiveness of IPV is staggering, with one in three women worldwide having experienced some form of intimate partner violence in their lifetime [5]. This global burden translates to approximately 736 million women and girls aged 15 years and older who have been subjected to physical and/or sexual violence by an intimate partner at least once in their lives. This phenomenon is particularly endemic in sub-Saharan Africa, where most women are at substantial risk of experiencing IPV [5]. The regional variation in prevalence rates reflects complex interactions between cultural norms, economic conditions, legal frameworks, and gender inequality. In some communities, rates of lifetime IPV experience exceed 50%, creating a normalized culture of violence that becomes intergenerational and self-perpetuating [31].

HIV/AIDS continues to impose a devastating physical and economic burden on individuals, healthcare systems, and society, with the impact being particularly severe in economically disadvantaged regions [9, 10]. The disease disproportionately affects vulnerable populations, with women bearing a significant portion of this burden due to biological, social, and economic factors that increase their susceptibility to infection. Women account for more than half of all people living with HIV globally, and in sub-Saharan Africa, they constitute nearly 60% of adults living with the virus. The intersecting and globally ubiquitous epidemics of rape and HIV are both driven by deeply rooted inequalities [6, 7]. These structural determinants include patriarchal social systems, economic dependency, limited educational opportunities for women, and legal frameworks that fail to protect women's rights and bodily autonomy. Research from South Africa has demonstrated that the association between intimate partner violence and HIV becomes stronger in contexts characterized by controlling behavior and high HIV prevalence [8]. In communities where, male control over female partners is normalized and HIV prevalence exceeds 15%, the risk of HIV transmission in violent relationships increases exponentially. These findings underscore how power imbalances within relationships amplify HIV transmission risk in settings where the virus is already prevalent, creating a dangerous synergy between the two epidemics [32].

## Prevalence of IPV and HIV in Sub-Saharan Africa

In sub-Saharan Africa, women account for 63% of new HIV infections, with intimate partner violence prevalence reaching approximately 40% in central and eastern regions [11]. This disproportionate burden reflects the complex interplay of biological vulnerability, gender inequality, and structural factors that place African women at heightened risk. The heterosexual transmission route, which accounts for the majority of HIV infections in the region, is heavily influenced by partner characteristics and relationship dynamics. Recent mapping studies across 26 sub-Saharan African countries revealed that 30.22% of women experience emotional violence, 30.58% experience physical violence, and 12.6% experience sexual intimate partner violence [12]. These figures likely

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Received Date: 07 Mar 2026

Accepted Date: 01 Apr 2026

Published Date: 03 Apr 2026

### Citation:

Bisrat M, Alemayehu W, Alayu KS, Amdemariam BM, Beyene E, Deverapal M, et al. Dual Epidemics: Intimate Partner Violence and HIV in Sub-Saharan African Women. *WebLog J Infect Dis.* wjid.2026.d0302. <https://doi.org/10.5281/zenodo.19549992>

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represent underestimates, as shame, stigma, fear of retaliation, and normalization of violence often prevent women from disclosing their experiences. Furthermore, many women experience multiple forms of violence concurrently, with studies showing that sexual violence is rarely isolated and typically occurs alongside physical and emotional abuse, creating a pattern of coercive control that severely restricts women's agency [33].

A 2024 meta-analysis of East African countries found that the pooled prevalence of intimate partner violence among women living with HIV was 54.6% (95% CI, 44.1-65.1%) [13], representing more than double the general population rate. This elevated prevalence among HIV-positive women raises important questions about temporal relationships and bidirectional associations between IPV and HIV. While violence clearly increases HIV acquisition risk, HIV-positive status itself may also increase vulnerability to violence through mechanisms including disclosure-related abuse, blame and accusations of infidelity, and exploitation of women weakened physical or economic state. Any type of intimate partner violence (physical, sexual, and psychological) has been consistently associated with greater HIV incidence [14]. Longitudinal studies have demonstrated dose-response relationships, with women experiencing multiple forms of violence or more severe violence facing substantially higher HIV acquisition rates. Additionally, the chronicity and frequency of violence appear to compound risk, as women in relationships characterized by ongoing patterns of abuse face cumulative exposure to the multiple HIV risk pathways associated with IPV [34].

Geographic disparities in violence prevalence are stark across sub-Saharan Africa. Sexual intimate partner violence ranges from 1.7% (95% CI; 1.3, 2.3%) in Comoros to 25.6% (95% CI; 24.6, 26.6%) in Burundi, with Uganda's Budara province recording rates as high as 65% [12]. Emotional violence prevalence ranges from 8.1% (95% CI; 7.1, 9.3%) in Comoros to 45.8% (95% CI; 44.3, 47.4%) in Sierra Leone [12] as seen in figure 1 below. These dramatic variations reflect differing cultural norms, legal protections, and social support systems across the region. Understanding these geographic patterns is essential for targeting interventions effectively and allocating resources where they are most needed.

## Mechanisms Linking IPV and HIV Transmission

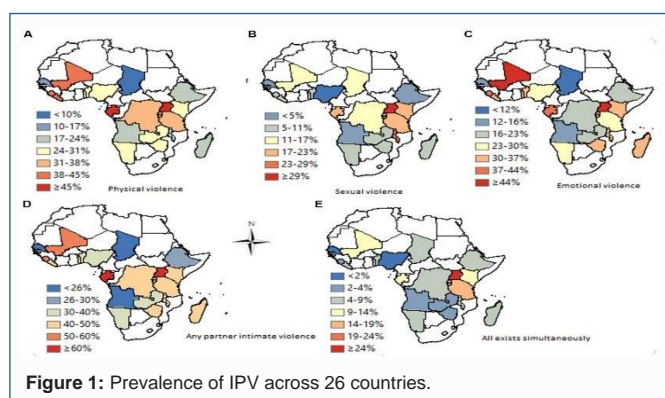
The relationship between violence and HIV transmission operates through multiple interconnected pathways, creating a self-reinforcing cycle that perpetuates both epidemics. Understanding these mechanisms is critical for developing effective interventions that address the structural drivers linking IPV and HIV. Intimate

partner violence increases exposure to HIV infection in women through direct transmission mechanisms and behavioral factors that compromise their ability to protect themselves. These pathways operate simultaneously and synergistically, amplifying women's vulnerability through biological, behavioral, and social mechanisms that interact in complex ways.

Male partners who perpetrate intimate partner violence demonstrate substantially higher rates of risky sexual behaviors, including maintaining multiple concurrent sexual partners, engaging in transactional sex, exhibiting greater controlling behaviors, and more frequent substance use compared with nonviolent men [15, 16]. These behavioral patterns are not random but reflect underlying attitudes toward masculinity, entitlement, and power that drive both violent behavior and sexual risk-taking. Studies have documented that men who perpetrate IPV are two to three times more likely to have concurrent sexual partnerships, increasing their probability of acquiring and transmitting HIV. Their substance uses patterns, particularly alcohol abuse, further elevate risk through impaired judgment, increased aggression, and reduced inhibitions around sexual behavior. These behavioral patterns create a dangerous epidemiological scenario where the men most likely to be HIV-positive are simultaneously the most likely to prevent their partners from negotiating safer sexual practices [35]. The power dynamics inherent in violent relationships systematically erode women's sexual autonomy, leaving them unable to refuse unwanted intercourse, negotiate condom use, or make informed decisions about their sexual health. Women in abusive relationships report that attempting to negotiate condom use often triggers violent reactions from partners who interpret such requests as implications of infidelity or challenges to their authority [36].

The violence is also associated with traumatic injury and significantly reduced condom use, which dramatically increases women's risk of acquiring infection. Genital trauma during forced or unwanted intercourse creates micro abrasions and tears in vaginal tissue that significantly facilitate HIV transmission by providing direct entry points for the virus into the bloodstream. The vaginal epithelium, when intact, provides a relatively effective barrier against HIV transmission, but this barrier function is severely compromised by trauma. The biological vulnerability created by such trauma can increase HIV transmission efficiency severalfold, with some studies suggesting that transmission probability may increase by 50-300% in the presence of genital injury. Furthermore, repeated trauma prevents adequate healing and may lead to chronic inflammation and tissue damage that creates persistent vulnerability to HIV acquisition [37]. A 2024 modeling analysis across 46 African countries found that 13% (95% UI 6-21%) of pediatric HIV infections - over 22,000 cases in 2022 - were attributable to intimate partner violence, with the proportion reaching 28% (13-43%) in Uganda [17]. These pediatric infections occur through multiple pathways: vertical transmission from mothers who acquired HIV through violence-related exposure, horizontal transmission in contexts where child abuse co-occurs with IPV, and in some cases, direct sexual abuse of children. In southern Africa, where women's HIV prevalence is highest at 23%, intimate partner violence led to 11 (5-20) additional infections per 1,000 births among affected women [17]. This substantial contribution to both maternal and pediatric HIV burden underscores the critical importance of addressing IPV as a central component of HIV prevention strategies [38].

Recently, anal intercourse has emerged as a critical yet



understudied risk mechanism in heterosexual relationships. This practice carries substantially higher HIV transmission risk than vaginal intercourse - estimated to be 10-20 times greater - due to the delicate and easily traumatized nature of rectal tissue. Evidence increasingly demonstrates that violence and coercion frequently characterize the context for anal intercourse within relationships. Quantitative evidence from India reveals a strong association between violence and anal sex [18-21], highlighting how controlling and violent partners may force women into sexual practices that carry dramatically elevated HIV transmission risk. This finding underscores the intersection between power, violence, and infection vulnerability.

The HIV risk associated with violence extends beyond victims' direct exposures. Violence perpetrators themselves engage in significantly higher levels of sexual risk behavior, including multiple concurrent sex partners, participation in transactional sex, and consistent condom non-use [22-24]. Men who perpetrate intimate partner violence have been shown to have higher rates of HIV infection themselves, with studies finding that women aged 15-24 had a 3% increase in HIV risk when they had a partner living with HIV who also perpetrated violence [25]. This dual risk - from both the partner's HIV status and his violent behavior - creates a particularly dangerous situation for women. Violence perpetrators are more likely to be HIV infected, and their violent behavior enhances the likelihood of subsequent transmission to their partners [26]. This creates a network of transmission that extends beyond individual relationships to affect entire communities.

## Psychological and Mental Health Impacts

Beyond the direct physical mechanisms, intimate partner violence exerts profound psychological effects that independently increase HIV risk and complicate HIV prevention, testing, and treatment efforts. Women experiencing intimate partner violence face elevated rates of mental health disorders, including depression, anxiety, Post-Traumatic Stress Disorder (PTSD), and substance use disorders, all of which can impair risk assessment, decision-making capacity, and health-seeking behaviors [18, 19]. The psychological trauma of abuse creates cognitive and emotional states that interfere with women's ability to protect themselves from HIV. Depression and PTSD symptoms, in particular, have been associated with reduced perception of personal risk, fatalistic attitudes about health outcomes, and diminished motivation for preventive behaviors.

The chronic stress and trauma associated with ongoing abuse can lead to maladaptive coping mechanisms, including increased alcohol and drug use as means of emotional escape or self-medication.

These substances use patterns, while providing temporary relief from psychological distress, create additional HIV vulnerability by impairing judgment during sexual encounters, increasing likelihood of engaging in transactional sex to support substance use, and reducing consistent adherence to prevention or treatment regimens. The psychological impact of IPV also manifests in damaged self-esteem and sense of agency, leaving women feeling powerless to change their circumstances or advocate for their health needs. This learned helplessness extends to HIV prevention, as women internalize messages of worthlessness and come to view their health and survival as less important than maintaining the relationship or avoiding further violence [39]. Many women experiencing chronic abuse report feeling that contracting HIV is inevitable given their circumstances, reflecting a profound resignation that undermines

prevention efforts and delays care-seeking even after diagnosis [40].

## Barriers to Healthcare Access and HIV Services

Fear of partner reaction creates substantial barriers to HIV testing and treatment adherence among women experiencing violence. Women in abusive relationships face multiple obstacles in accessing HIV prevention and care services, stemming from both direct control by partners and internalized fear of violent consequences. Many abusive partners actively restrict women's movement, monitor their activities, control financial resources, and explicitly forbid healthcare visits - behaviors that severely limit access to HIV testing, prevention services, and treatment facilities. Even when women manage to access services, fear of what might happen if HIV testing or medication is discovered at home can prevent them from accepting testing or consistently taking antiretroviral medications.

Research has documented that women experiencing IPV are significantly less likely to test for HIV, disclose positive status to partners, or maintain consistent engagement in HIV care compared to women not experiencing violence [20, 21]. The fear is well-founded, as studies across sub-Saharan Africa have documented numerous cases of severe violence, abandonment, and even homicide following HIV status disclosure by women. This creates an impossible dilemma: women understand the importance of knowing their status and accessing treatment, but perceive that doing so may trigger life-threatening violence or economic abandonment that would leave them and their children destitute. The result is delayed testing, hidden status, secret medication use, and poor treatment adherence—all of which compromise both individual health outcomes and population-level transmission prevention [22]. Analysis of nationally representative surveys across sub-Saharan Africa examining the HIV care cascade found that intimate partner violence affects not only HIV acquisition but also women's engagement in testing, treatment uptake, and viral suppression [30]. This demonstrates that violence undermines HIV prevention and treatment efforts at every stage, from initial infection risk through long-term disease management.

## Structural and Cultural Determinants

The perpetuation of both intimate partner violence and HIV transmission in sub-Saharan Africa is deeply rooted in structural inequalities and cultural norms that disadvantage women across multiple domains of life. Gender inequality manifests through unequal access to education, employment, property ownership, and political participation, creating economic dependency that traps women in violent relationships and limits their autonomy in sexual decision-making. In many communities, women's economic survival depends entirely on maintaining relationships with male partners, making leaving an abusive relationship economically impossible regardless of the violence or HIV risk involved. This economic dependency is reinforced by legal systems that restrict women's property rights, inheritance rights, and access to credit, leaving women with few options for independent survival [23, 24].

Cultural norms around masculinity, sexual entitlement, and female subordination create permissive environments for both violence and risky sexual behavior. In many settings, dominant constructions of masculinity emphasize sexual conquest, multiple partnerships, control over female partners, and rejection of vulnerability—attitudes that drive both IPV perpetration and HIV risk behaviors. Traditional gender norms that position women as sexually passive and submissive

undermine their ability to refuse sex, negotiate condom use, or insist on fidelity. These norms are often reinforced through social institutions including family systems, religious organizations, and community structures that prioritize relationship preservation over women's safety and well-being. Bride price and dowry systems in some communities further reinforce notions of women as property, creating expectations of male sexual entitlement and ownership that legitimize violence and undermine women's sexual autonomy [25]. Community tolerance of intimate partner violence, reflected in attitudes that view violence as a private family matter or as justified under certain circumstances, discourages women from seeking help and perpetrators from facing consequences. This normalization of violence becomes self-reinforcing, as each generation witnesses and internalizes these patterns, transmitting them to the next [26].

A study in Zambia starkly illustrated how subservience in marriage, often enforced through violence, fundamentally compromises women's ability to protect themselves from HIV infection [27-29]. Less than one quarter of women in the study believed that a married woman could refuse to have sex with her husband even if he had been demonstrably unfaithful and was known to be infected with HIV. Only 11% of women thought a woman could ask her husband to use a condom under these circumstances [27-29]. These findings reveal the profound impact of patriarchal gender norms and power imbalances on women's capacity to exercise even the most basic self-preservation. Cultural expectations surrounding marital obligations and wifely duties effectively supersede women's right to bodily autonomy and health protection, trapping them in situations of knowing, unavoidable exposure to HIV infection [27-29].

## Intervention Approaches and Policy Implications

Addressing the dual epidemics of intimate partner violence and HIV requires comprehensive, integrated approaches that simultaneously target both health challenges while addressing their common structural drivers. Evidence increasingly demonstrates that HIV interventions that fail to address intimate partner violence, and violence prevention programs that ignore HIV, miss critical opportunities for synergistic impact and may inadvertently increase harm. Integrated programs that address both IPV and HIV have shown promise in several African settings, demonstrating that it is possible to reduce both violence and HIV risk through coordinated interventions [27, 28]. Successfully addressing the HIV epidemic requires explicitly acknowledging and confronting the central role of gender-based violence in driving transmission [31, 32]. Public health interventions must move beyond individual-level biomedical approaches to integrate comprehensive violence prevention and response into HIV programs [31-33].

Economic empowerment initiatives that provide women with microfinance opportunities, skills training, and pathways to economic independence have demonstrated dual benefits in reducing both IPV and HIV risk. Programs such as IMAGE (Intervention with Microfinance for AIDS and Gender Equity) in South Africa combined microfinance with participatory training on gender norms, HIV prevention, and domestic violence, resulting in significant reductions in IPV experience and improvements in HIV-related outcomes. These programs work by reducing women's economic dependency on abusive partners, enhancing their bargaining power within relationships, and creating social support networks that

challenge violence-tolerant norms. Economic empowerment appears to have threshold effects, with poverty alleviation alone insufficient to reduce violence, but combined approaches that address both material resources and gender norms showing substantial impact [29, 30].

Engaging men and boys in challenging harmful gender norms and violent behaviors represents another critical intervention approach. Programs that work with men to question traditional masculinity norms, develop non-violent conflict resolution skills, promote equitable relationships, and address childhood trauma have shown effectiveness in reducing IPV perpetration and HIV risk behaviors. Community mobilization approaches that create collective examination and transformation of gender norms have demonstrated sustained reductions in acceptance of violence and improvements in gender-equitable attitudes. These interventions recognize that changing individual men's behavior requires also changing the social context that rewards dominance and violence while penalizing vulnerability and equality.

Healthcare providers require training to recognize signs of intimate partner violence, provide trauma-informed care, facilitate safe disclosure of violence experiences, and connect women to both HIV services and violence support resources. Integrating IPV screening and response protocols into HIV testing and treatment services creates opportunities to identify at-risk women and provide appropriate support while respecting their safety and autonomy. However, screening must be implemented carefully with adequate training, referral resources, and safety protocols to avoid creating harm through poorly managed disclosure or inadequate follow-up support [28]. This integration demands economic empowerment initiatives that reduce women's financial dependence on abusive partners, legal reforms that genuinely protect survivors of violence with effective enforcement mechanisms, educational programs that challenge harmful gender norms from childhood onward, healthcare services that routinely screen for intimate partner violence and provide trauma-informed care, and community mobilization efforts that engage men and boys in promoting gender equality and nonviolent relationship norms [31-34].

## Conclusion

The intertwined epidemics of intimate partner violence and HIV in sub-Saharan Africa represent interconnected public health crises that demand coordinated, comprehensive responses addressing their shared structural roots in gender inequality, economic disparity, and discriminatory social norms. The evidence overwhelmingly demonstrates that these are not separate issues to be addressed in isolation, but rather mutually reinforcing phenomena that share common drivers and require integrated solutions. Effective intervention requires moving beyond individual-level approaches to address the structural and cultural determinants that perpetuate both epidemics, including economic inequality, gender-based discrimination, harmful masculinity norms, and inadequate legal protections for women. Only through such comprehensive approaches that simultaneously promote gender equality, economic opportunity, legal reform, and social norm change can we meaningfully reduce the devastating toll of both intimate partner violence and HIV on African women's lives. The path forward demands political will, sustained investment, intersectoral collaboration, and most critically, the meaningful participation of women themselves in designing and implementing solutions. Success will require challenging deeply entrenched power structures and confronting cultural norms that

have persisted for generations, but the alternative - continuing to lose hundreds of thousands of women to preventable violence and infection each year - is unconscionable. The dual epidemics of intimate partner violence and HIV will only be resolved through sustained commitment to gender equality, women's empowerment, and the fundamental recognition of women's rights to bodily autonomy, safety, and health.

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