

Gender-based violence and HIV: relevance for HIV prevention in hyperendemic countries of southern Africa

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Gender-based violence (GBV) is common in southern Africa. Here we use GBV to include sexual and non-sexual physical violence, emotional abuse, and forms of child sexual abuse. A sizeable literature now links GBV and HIV infection.

Sexual violence can lead to HIV infection directly, as trauma increases the risk of transmission. More importantly, GBV increases HIV risk indirectly. Victims of childhood sexual abuse are more likely to be HIV positive, and to have high risk behaviours.

GBV perpetrators are at risk of HIV infection, as their victims have often been victimised before and have a high risk of infection. Including perpetrators and victims, perhaps one third of the southern African population is involved in the GBV-HIV dynamic.

A randomised controlled trial of income enhancement and gender training reduced GBV and HIV risk behaviours, and a trial of a learning programme reported a non-significant reduction in HIV incidence and reduction of male risk behaviours (primary prevention). Interventions among survivors of GBV can reduce their HIV risk (secondary prevention). Various strategies can reduce spread of HIV from infected GBV survivors (tertiary prevention). Dealing with GBV could have an important effect on the HIV epidemic.

A policy shift is necessary. HIV prevention policy should recognise the direct and indirect implications of GBV for HIV prevention, the importance of perpetrator dynamics, and that reduction of GBV should be part of HIV prevention programmes. Effective interventions are likely to include a structural component, and a GBV awareness component. © 2008 Wolters Kluwer Health | Lippincott Williams & Wilkins

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Introduction

There is no standard definition of gender-based violence (GBV) and different authors have used this and other terms to include different things. Terms such as ‘rape’, ‘forced sex’ and ‘sexual violence’ readily convey a physical dimension, with images of trauma, laceration and thus facilitated HIV infection. We argue in this paper, however, that the link between GBV and HIV risk goes beyond this physical dimension. Also relevant is sexual coercion of any kind, irrespective of whether this is ‘acceptable’ in the local culture. Of particular relevance is

child sexual abuse (CSA), including actual or attempted forced sex, sexual coercion, and emotional abuse. Non-sexual physical violence, and related forms of abuse based on gender are also a part of the whole picture. The commonly used terms ‘domestic violence’ and ‘intimate partner violence’ (IPV) are often used to cover sexual as well as non-sexual violence and other forms of abuse in this setting.

GBV is a complex phenomenon often including a combination of physical, sexual and emotional violence and deprivation or neglect. Authors of the papers cited

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here used different terms to cover different aspects of GBV; we have generally reported on their findings using their own terminology.

GBV is relevant to the HIV risk of young women and girls in more than one way. There is an obvious direct relevance when the trauma of forced sex of any kind – rape, dry sex or lack of readiness – with an infected partner increases the risk of transmission, but the fear and power differentials associated with GBV also limit the ability to negotiate safe sex. GBV increases gender inequalities and is an important cause of ‘choice disability’ [1]. This refers to the inability of those affected by GBV to make and implement prevention decisions.

A number of authors reported that survivors of different forms of GBV, particularly those who have survived repeated abuse, have a reduced sense of self worth that in turn can increase high-risk behaviour and the acceptance of high-risk practices. Any sexual coercion or the fear of it that disables HIV prevention choices could have a very direct meaning for HIV transmission. This is independent of subjective norms about sexual entitlement or ‘deserving victimhood’ [2]; it is very simply about the inability of people to implement their prevention decisions.

In this paper we explore the evidence for a causal association between GBV and HIV in the hyperendemic countries of southern Africa, and the implications of this for HIV prevention efforts. On the basis of the evidence, we argue that, mainly indirectly, GBV in many forms can influence HIV risk in a determining and potentially actionable way.

The extent of gender-based violence in southern Africa

GBV is common in HIV hyperendemic countries of southern Africa. In a 2002 survey across eight countries (Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Zambia and Zimbabwe) we found that 18% of women aged 16–60 years had experienced IPV in the past 12 months [3]. In a repeat survey across the same countries in 2007, 18% of women had experienced IPV in the past 12 months; one in every five youths aged 12–17 years said they had been forced or coerced to have sex, and one in 10 said they had forced sex on someone else [Centro de Investigación de Enfermedades Tropicales (CIET) 10-Country Study 2007, unpublished data]. The inability to implement prevention choices (‘choice disability’) affects a greater proportion of the population. Some 40% of women across the 10 countries said they would have sex if their partner refused to use a condom, and a similar proportion did not think women have the right to refuse sex with their partner (CIET, unpublished data).

Other authors also report high rates of GBV among populations of women in southern Africa. Among women interviewed in three provinces of South Africa,

19–28% said they had experienced IPV and 5–7% had been raped [4]. An intercept survey (likely to underestimate occurrence) found 42% of women in a Cape Town township reported sexual assault [5]. In Rakai district in Uganda, one in every four women reported coercive sex with their regular partner [6]. The World Health Organization multicountry study on domestic violence included estimates from Namibia and Tanzania. The proportion of women who had ever experienced physical or sexual violence was 36% in Namibia (capital), 41% in Tanzania (capital), and 56% in Tanzania (district) [7]. A recent study among young women aged 13–24 years in Swaziland reported that one in three had experienced some form of sexual violence (including forced sex, coerced sex, and attempted unwanted sex) as a child; one in four had experienced physical violence; and three in 10 had experienced emotional abuse [8].

These high rates of GBV among both adults and children in southern Africa are in the context of a culture of violence in the region, with extremely high rates of violence overall [9].

Methods of literature search

This review makes use of the evidence gathered using a standard systematic review methodology. We searched databases Ovid MEDLINE (1966 to April 2008), preMEDLINE (to April 2008), EMBASE (1980 to April 2008), PsychINFO, CINHALL and NLM gateway (to April 2008) and the Cochrane Database of Systematic Review, May 2007, for articles about GBV and HIV. We improved the sensitivity by including text and key words from relevant studies accessed by the authors that were not detected by earlier searches. We searched for additional studies in the bibliographies of the eligible studies. We also identified articles that had referred to key tracer articles using Google Scholar. We contacted content experts in the field, for key articles and additional publications this is area.

Two reviewers (NA, BS) independently screened 1288 titles from the electronic search results. Two abstract reviewers then screened all abstracts selected by either title reviewer. Two article reviewers independently assessed the full articles and agreed on inclusion, using a standardized form for data abstraction. Study characteristics and outcomes extracted included: contexts of study setting, incidence of HIV/AIDS or sexually transmitted infections (STI), and prevalence of HIV/AIDS or STI; characteristics of populations involved; type of intervention; outcome measures; and study quality. Two reviewers independently assessed methodological quality before analysis.

The papers cited are those of sufficient quality to allow defensible conclusions. We used published evidence to examine the links between GBV and HIV, to look at the

possible mechanisms for the links, and to evaluate the evidence for effectiveness of the reduction of GBV and its effects as a strategy for reducing HIV risk. We tried to refer primarily to evidence from southern Africa or at least to countries with a high prevalence of HIV. When there was no evidence from the region, we relied on evidence from other places, most of it from north America. Although there can be problems in extrapolating this evidence to southern Africa (see Limitations of the evidence, below), it could offer useful insights into relationships between forms of GBV and HIV risks.

Results

Causal association between gender-based violence and HIV?

There is now a sizeable body of research on the associations between GBV and HIV risk. Many of the studies come from the United States but some are from southern Africa and elsewhere. The main focus is on the link between GBV and HIV in women, but some studies have covered gay men. At least a dozen literature reviews, mostly within the past 5 years, cover several hundred articles on the subject [10–22]. The literature covers different aspects of the association and different forms of GBV, offering cumulative evidence on the link between GBV and HIV infection. All these reviews focus on HIV risk in women; four are from Africa, five from the United States, and four are international.

Many studies show higher HIV risks among people with a history of GBV [23–26] (these four studies are among women, three from Africa and one from the United States) and higher rates of GBV among those who are HIV positive [27–33] (five of these studies are among women, one among gay men and one among women and gay men; one is from Africa and the others from the United States). Mostly cross-sectional designs, these studies do not tell us what comes first, GBV or HIV. This underlies the pivotal question in this paper: if we reduce GBV in HIV hyper-endemic countries in southern Africa, will that reduce the HIV risk, particularly of young women and girls?

Several specific types of evidence contribute to the case for GBV as an actionable predictor of HIV infection: (1) Prospective (follow-up) studies show previously HIV-negative victims, after being raped, have a considerable risk of becoming HIV positive [34–37] (three of these four studies among women were from the United States, one was from Africa). This demonstrates a direct mechanism for GBV causing HIV infection [38]. (2) Cohort studies in Africa of HIV-discordant partners (one partner HIV positive and the other HIV negative) show an increased risk of infection among partners who report GBV [39–41]. GBV can be more common in HIV-discordant couples; for example, Cohen *et al.* [42] reported a 12-fold increase risk of domestic violence

among HIV-positive women in the United States. (3) Several studies report an association between CSA and HIV risk in later life [42–47] (five of these studies are from the United States, one is from Africa; two are concerned with gay men). As the exposure is in childhood when HIV risk is low, the sexual abuse can reasonably be said to precede HIV infection. Some may have been infected directly in childhood, or the experience of CSA may increase HIV risk indirectly, by disabling prevention choices or increasing high-risk behaviour (see below). (4) Coerced first intercourse at any age can establish the survivor in a victimhood role that can last a lifetime [18,48]. This can have indirect consequences on HIV risk. Ugandan women who reported coerced first intercourse were significantly less likely to report current contraceptive use, condom use at last sex, or consistent condom use in the past 6 months [48]. (5) Supportive evidence comes from one author who reported a gradient of HIV risk with increasing frequency of IPV among women in Soweto, South Africa [49].

Taken as a whole, the literature provides compelling evidence that the link between GBV of various sorts and HIV may be actionable for prevention. The paradox of forced passivity of GBV survivors is that this disenfranchised group actually becomes a driver of the epidemic. In addition to their own risk, inability of the choice-disabled to protect themselves increases the risk for their offspring and for everyone who has sexual contact with them.

Published research also offers insights into the mechanisms by which reduced GBV might reduce HIV risk, the context of vulnerability that would need to be taken into account in prevention, and the evidence of the impact of interventions to reduce GBV.

Association between gender-based violence and high-risk behaviours

Several dynamics have been postulated for an indirect link between GBV and HIV risk. These include choice disability in relation to prevention decisions [1], reduced self-esteem [23], sexual adjustment, drug use as a method of coping, or psychopathology such as depression [50]. These factors associated with or resulting from GBV increase the risk of HIV by increasing the likelihood of high-risk behaviours. The evidence suggests that these indirect effects of GBV produce a greater impact than the direct effects of the trauma of sexual violence. There is evidence of the link between GBV and high-risk behaviours from Africa, from the United States and elsewhere. Much of the evidence is concerned with risk behaviours in women, but some studies have reported on behaviours in heterosexual and gay men.

Overall risk behaviour

Several studies have reported an increase in risk behaviours among people who report sexual coercion, IPV, or sexual assault [5,51–53] (four of these studies were

from Africa, mainly concerned with women). Choi *et al.* [54] measured types of violence and HIV risk factors and found that sexually harassed men (but not women) and sexually coerced women (but not men) in the United States reported more HIV risk factors than their non-harassed or coerced counterparts.

High-risk attitudes

Kalichman and colleagues [55] reported that South African men with a history of sexual assault were more likely to endorse hostile attitudes towards women and were more likely to accept violence against women. A youth culture has emerged in South Africa in which young people who suspect they may be infected with HIV will avoid a definite diagnosis while at the same time seeking to spread the infection as widely as possible [56]. A 2002 national school-based youth study in South Africa reported one in every 10 young people saying they would deliberately spread the infection; this was much more common among youth who reported they had had forced sex. That study reported that childhood GBV survivors were more likely to say they had forced someone else to have sex and were more likely to believe that condoms do not protect against HIV [57].

Multiple partners

Higher rates of multiple partners are consistently associated with GBV. Many studies found that those who reported IPV, rape, childhood sexual molestation, were sexually harassed or experienced violence, or who reported that their first sex was coerced, were more likely to report having multiple partners [18,24,58,59] (most of these studies were from the United States). Champion *et al.* [60] found that minority women in the United States who were sexually abused reported significantly higher rates of sexual partner contact (changes) at 1 month, 3 months and 12 months. Adults in the United States who reported being abused compared with those non-abused had higher numbers of lifetime partners [59].

Transactional sex

Situations in which sex is based on material exchange often involve sizeable power differentials; sex work is an archetypically high-risk occupation for both GBV and HIV [61–63] (these studies were from the United States, India, and Australia). Many people who engage in 'survival sex' in southern Africa do not consider themselves sex workers [64]. Food insecurity in southern Africa is strongly linked with the acceptance of high-risk behaviours, after taking account of other aspects of poverty [65]. In the southern part of South Africa, approximately one in six men reported the transfer of material resources or money to both casual and main partners [66]. In Soweto, 21% of women said they had had sex with a non-primary partner based on material exchange [49]. Also in South Africa, women sex workers who reported having experienced sexual violence were significantly less likely to use a condom with paying

partners than women who had not experienced sexual violence [67]. In a US based study, people who reported unwanted sexual activity in childhood were significantly more likely to have problems with alcohol, to use drugs, to receive money or drugs in exchange for sex, to have unwanted sex, and to use mental health services [68]. In their meta-analysis of three longitudinal and 13 cross-sectional studies, Arriola and colleagues [18] found a very strong relationship between CSA and 'sex trading'.

Unprotected sex

Many women are in a situation in which they cannot insist on condom use [69]. Several studies have shown that GBV in childhood [18] or adulthood [58,70,71] (studies from the United States) is related to inconsistent use of condoms. Heintz and Melendez [72] found that among lesbian, gay, bisexual, and transgender individuals in the United States those who reported that they had been forced to have sex with their partner were 10 times more likely than others to report not using protection – they feared their partner's response to safer sex. Women in the United States who reported rape were significantly more likely to report previous unprotected anal intercourse than women who had not been raped [58]. Wu *et al.* [24] found that urban minority women in the United States who reported IPV used condoms less often than women who had not experienced IPV.

Reduced testing or disclosure of status

HIV-testing and disclosure of status after testing may be influenced by GBV [73–75] (studies from the United States). Fear of violence reduces disclosure of HIV status [76] (study from the United States). A study in Botswana in 2005 found that 14% expected changes in the HIV testing policy to increase GBV [77]. A 2006 study in the same country, however, found no significant association between having had an HIV test and the experience of IPV among either men or women, although those who had experienced IPV were more likely to think themselves at risk of HIV [78]. HIV-seropositive women were five times more likely to report domestic violence after notifying partners of results compared with HIV-seronegative women in a US-based study [26].

Sexually transmitted infections

STI are important predictors of HIV infection as they usually indicate high-risk sex; the damaged mucosa is also an important facilitator of HIV transmission. Several studies in the United States and South Africa measuring STI incidence found that individuals reporting abuse have a much higher rate of STI than those not reporting abuse [24,60,67].

Reception of awareness programmes and education

People who have experienced GBV apparently do not interpret awareness programmes and education messages in the same way as those without such a history. Women slum-dwellers in India who had experienced GBV chose to

continue with unsafe practices for HIV infection rather than face the immediate threat of violence from their partners [79]. There is evidence from Kenya that a history of GBV reduces the likelihood of partner participation in programmes for the prevention of mother to child transmission [26].

Perpetrators of gender-based violence

An unlikely but crucially vulnerable group are GBV perpetrators, many of whom live in wider contexts of risk, such as substance abuse [80,81] (studies from the United States and South Africa). The notion that perpetrators have themselves been victims of sexual abuse is not new [82], and it is well established that people who have been sexually abused as children are more likely to become abusers themselves [83–85] (studies from South Africa and the United States). Several studies of South African men found that those who had forced sex with their partners were also more likely to force others and to indulge in transactional sex [86,87]. A study of rural young men in South Africa reported that 8% had raped a partner and 16% had raped a non-partner [81]. A study from the Eastern Cape Province of South Africa reported that 32% of young men had perpetrated some form of sexual violence against their main partner; those who had perpetrated violence were more likely to engage in HIV risk behaviour [86]. A further study of men in South Africa reported that 23% admitted to sexually assaulting women [87]. One in five men in a Cape Town settlement had perpetrated sexual assault [55].

As described above, GBV survivors are more likely than others to be HIV positive. As abusers tend to pick on people who have already been abused [88] (study from South Africa), perpetrators of GBV put themselves at special risk of HIV infection. The disdain that perpetrators of sexual violence have for the rights of other people – non-disclosure of their own HIV status, refusal to use condoms, and forced sex – rapidly converts their acquired infections into risks for future victims.

The context of vulnerability

Contextual vulnerability can multiply HIV risks, with both GBV victims and their abusers having elevated infection rates.

Living with violence

Childhood exposure to family violence is an important vulnerability context [89,90] (studies from the United States). Studies from Africa and elsewhere suggest that people living with physical disability may be at special risk [91,92]. Arriola and colleagues [18] reported 21 studies (20 956 participants) showing CSA was strongly associated with adult revictimization (meaning experiencing further sexual violence as adults). This compounds the direct and indirect linkages between GBV and HIV.

The violence of war in Africa is another context in which HIV and its prevention confront a special reality [93,94].

Factors associated with war include weak health systems for treating STI, illiteracy that diminishes the utility of educational pamphlets, rape and sexual bartering by soldiers, battlefield transfusions, tattooing [95]. The extremely high levels of violence in South Africa and other countries in the region could have similarities to a war situation [9].

Unequal gender power relations

Unequal gender power relations are a fertile substrate for HIV and GBV, as reported from South Africa [96]. A particular moment of vulnerability to unequal power relations is pregnancy [75]. Other important dynamics of unequal power are intergenerational sex and transactional sex. Many authors have considered the relationship between low economic status and HIV. Global evidence suggests that the relationship between poverty and HIV risk is complex, and that poverty on its own cannot be viewed simplistically as a driver of the HIV epidemic [97]. Although studies have indicated a link between socio-economic status and GBV [98–100], GBV is by no means confined to people living in poverty. Incarceration [101], minority [24,52,60,102] and migrant [103] status or relocation [104] are similarly linked, as is substance abuse [105,106], or a co-occurrence of these contexts [107–109]. Almost all of these studies are from the United States. The common denominator in these settings is choice disability and the context can exaggerate its impact on HIV.

Dangerous myths and gender-based violence

Reconstructed traditionalism in several southern African settings can be accompanied by distorted ideas of personal power that increase the risks of children and women for GBV and hence HIV [110,111]. Mistaken beliefs about HIV and AIDS persist, including the now much publicized idea that sex with a virgin can help to treat HIV or AIDS [112–115].

Alcohol abuse

Heavy alcohol use and in particular binge drinking are common in southern Africa. Both GBV and HIV risk behaviours have been linked to alcohol use, among women as well as men in South Africa [116].

Legal systems

Legal systems currently generate little disincentive to spread HIV – or, in many countries, even to rape [117]. Some southern African countries do not have free antiretroviral post-exposure prophylaxis available for victims of rape [16]. Women and children remain vulnerable because of legal systems that do not take the issue of violence seriously or that discriminate against women reporting violence or rape.

Programme exposure

All eight hyperendemic countries have an AIDS prevention programme of some kind. These programmes comprise multiple elements, some of which may be

conflicting. Messages about condoms might cancel out messages about abstinence. Campaigns promoting male circumcision might reduce the impact of discussions about equity and respect. A US study suggested that sexual abuse may affect the way survivors interpret HIV risk education [118].

Evidence of impact of interventions to reduce gender-based violence

Non-randomized intervention studies

There are published reports of formal non-randomized before–after comparisons, for example, one on peer educators that declared increased knowledge of HIV prevention as a result [119]. A review of nine non-randomized north American GBV prevention initiatives [120] found only one, of increased use of community resources by pregnant Hispanic women [121], to be of acceptable methodological quality. Three others were of adequate quality. Foshee and colleagues [122] looked at a school intervention (including curriculum sessions, a theatre production and a poster competition) to reduce victimization, acceptance of dating violence norms, gender stereotyping and conflict management. Macgowan [123] reported on a five-session curriculum programme and Weisz and Black [124] reported on a programme of 12 after-school sessions, including role play and discussions; both interventions aimed to increase awareness of IPV and how to deal with it among high school students.

A non-randomized intervention between 1997 and 2003 targeted hawkers and apprentices in motor parks and work shops in Nigeria. Interventions included education materials and training programmes for the police, judiciary, instructors, drivers, traders and apprentices/hawkers, including microcredit facilities. The authors claim this made a difference, protecting this group from the dual risks of GBV and HIV/AIDS infection [125,126].

A small but potentially misleading literature on interventions to reduce GBV claims that spontaneous resolution will arise in South Africa, based on an idea of cultural regeneration [14].

Primary prevention randomized controlled trials

A randomized controlled trial (RCT) in South Africa's Limpopo province tested an intervention based on participatory learning principles, a 12–15-month training curriculum called Sisters for Life, together with a microfinance programme. The training, during loan centre meetings, started with 10 1-h training sessions. It covered topics including gender roles, cultural beliefs, relationships, communication, IPV and HIV, and aimed to strengthen communication skills, critical thinking and leadership. It then encouraged wider community mobilization to engage young people and men in the intervention communities. Key women selected by their

centres attended a further week of leadership training and subsequently worked with their centres to mobilize around priority issues including HIV and IPV. In parallel, each loan centre continued the microfinance intervention. The combined intervention reduced IPV by 55% (based on the complement of the adjusted risk ratio). The measured risk difference (7.3%) implies that 14 women would need to be included in the programme to prevent one case of IPV [127,128].

The Limpopo study also showed an impact on unprotected sex among the women participants [97]. It did not show an impact on HIV status, which requires close scrutiny, as this is one of few published RCTs that might have shown a reduction of HIV by reducing GBV. The authors estimated HIV incidence from a random sample of all community members where the 421 intervention women lived. The microfinance participants themselves were generally older women (median age 42 years) and outside the high-risk age group for HIV infection. A positive result for HIV incidence as measured in this study would have required the benefits of the structural and educational intervention for these women to spread across the whole community within 2 years, to affect younger women and men not involved in the intervention.

Another trial of primary prevention of GBV and HIV took place in South Africa's Eastern Cape Province [129]. In this cluster randomized trial, young women and men aged 15–26 years in the intervention communities were recruited to attend the Stepping Stones participatory learning programme of 13 3-h sessions and three peer group meetings, covering issues of sex, GBV and HIV prevention. The programme was compared with a 3-h session on safer sex and HIV in the control communities. Two years after the baseline assessment, the authors reported that women who had participated in the Stepping Stones programme had 15% fewer new HIV infections than those in the control arm [incidence rate ratio (IRR) 0.85; 95% confidence interval (CI) 0.60–1.20] and 31% fewer herpes simplex virus type 2 (HSV-2) infections (IRR 0.69; 95% CI 0.47–1.03). Among men, HIV incidence was very low and no difference was detected between intervention and control communities; Stepping Stones men had 28% fewer HSV-2 infections (IRR 0.76; 95% CI 0.36–1.46). Although these early results for HIV and HSV-2 infections can be explained by chance (5% level), 2 years is a short period to see a reduction in HIV incidence, and they do suggest the intervention may eventually have a significant impact on sexual behaviour and HIV rates [130].

Among the women participants, the authors found no differences in sexual behaviours compared with the control group, but Stepping Stones men reported significantly fewer sexual partners and were significantly more likely to report the correct use of condoms.

Significantly fewer Stepping Stones men reported perpetrating IPV, but there was no difference in reported IPV among Stepping Stones women.

Two further trials are under way, one in Limpopo and Eastern Cape Province, involving the training of female elders [131]. A pragmatic RCT in Botswana, Namibia and Swaziland is currently testing the interface between a structural intervention, a GBV awareness intervention and a service delivery intervention focussed on the choice disabled [132].

Secondary prevention randomized controlled trials

Most HIV prevention strategies are aimed at people who already have risk factors. Some of these could be relevant to GBV survivors. The evidence cited in this section comes mainly from the United States. Although recognizing the very different context from southern Africa, these studies can nevertheless suggest that various interventions with GBV survivors can help reduce the effect of GBV on subsequent HIV risks, and can provide pointers for prevention research with GBV survivors in southern Africa. The form of support programmes for GBV survivors in southern Africa would need to be tailored to the context and may be different from those used in the United States.

Recovery from GBV could be a mainstay of secondary prevention – people who experienced GBV but who are not yet HIV positive. One study in the United States examined how resiliency (represented by optimism, social support, religiosity, and finding growth and meaning) was linked to perspectives on addressing trauma among individuals with CSA [133].

Negotiating skills RCT subgroup analysis of 152 GBV survivors tested the impact of an eight-session ‘psycho-educational’ intervention, designed to be fun as well as action oriented. Role-playing, problem solving, letter writing, attitude confrontation, story telling, and modelling were among the interactive techniques employed. The sessions covered: (1) Why should I care about getting STD and HIV? (2) How do I avoid partners who don’t care? (3) What’s the best way to protect myself? (4) How can I find out if we are infected? (5) How do I ask my partner to use protection? (6) How do I influence my partner to use protection? (7) How do I refuse sex or unprotected sex? (8) How do I continue protecting myself and others? The intervention decreased the number of unprotected sex episodes and increased the use of alternative strategies (like refusal, ‘outer course’ or mutual testing). The intervention did not decrease subsequent GBV but shows the potential for improved negotiating skills to interrupt the link between GBV and HIV [134].

Condoms There is considerable evidence of the impact of programmes that seek to increase condom uptake with regular partners. Another US-based RCT performed a

subgroup analysis of GBV survivors. The education/awareness intervention emphasized ethnic and gender pride, HIV knowledge, condom attitudes, healthy relationships, communication, and condom use skills. The intervention group reported using condoms more consistently, had fewer episodes of unprotected vaginal sex, engaged in more protected intercourse acts, were more likely to have used a condom during their most recent intercourse, were less likely to have a sexually transmitted disease, and demonstrated more proficient condom skills [135]. The impact on use with casual partners, in which most risk is located, and on HIV rates was less impressive [136].

Other prevention approaches Male circumcision could arguably be considered ‘long term’ secondary prevention, as this could protect male GBV perpetrators from infection by their victims, and thus reduce the cycle of infection.

Tertiary prevention randomized controlled trials

The mainstay of tertiary prevention is encouraging HIV medication adherence among GBV victims with AIDS, the recovery from the trauma of the experience and barriers to further transmission. Again, the trial evidence around tertiary prevention among survivors of GBV with HIV infection comes mainly from the United States. Direct extrapolation to the context of southern Africa is difficult, but the evidence indicates possible research and future policy directions in southern Africa.

In an RCT in the United States, Wyatt and colleagues [137] found that women who attended eight or more sessions of a ‘psycho-educational’ programme reported greater medication adherence than control women.

The RCT of Sikkema and colleagues [138] found that a 15-session coping group intervention (compared with a 15-session support group and a waiting list group) produced improvement in traumatic stress symptoms and behavioural difficulties among HIV-positive individuals [44].

Another US-based RCT subgroup study of GBV survivors among women with AIDS looked at the acceptability of barrier products (male and female condoms and spermicides) supplied with three training sessions. The intervention increased the use of spermicides at 3 months [139].

Discussion

Limitations of the evidence

The complexity of the phenomenon of GBV, the different and overlapping terminology used by authors, and the frequent co-existence of different forms of GBV mean that it is not possible to link only one or more forms

of GBV (such as specifically sexual violence) to HIV, or to conclude that other forms of GBV (such as emotional abuse) are not linked significantly to HIV risk. There are also several limitations of our review.

Scope

We limited the review to empirical and published research. This excludes much individual and qualitative experience and many small-scale successes or failures in dealing with GBV and HIV. It was beyond the scope of this paper to consider the evidence for factors causally related to GBV; there are many published reviews on this topic. We did not review or evaluate existing policies and programmes for GBV and HIV prevention in the HIV hyperendemic countries of southern Africa, although we refer to them in general terms.

We believe our literature search approach identified most if not all the published papers covering the link between the forms of GBV and HIV, covering relevant prevention trials for HIV by tackling GBV. We have not conducted a review of the research strategies and programmes by universities and other bodies in the region, although it would be interesting to do so if resources were available for this. The South African Development Community HIV Research Unit has recently published a research agenda for HIV, following extensive consultation [140].

Source of evidence

When possible, we looked primarily for evidence from southern Africa or at least from Africa or other developing countries with a high prevalence of HIV. In some cases there was limited or no evidence from within the region so we referred to evidence from elsewhere, particularly north America. This evidence must be interpreted with caution for its relevance to the region, because of the very different context for GBV, HIV and access to services.

Quality of evidence

Although there has been an explosion of the literature in the past few years, the quality of much of it is low, and several pieces of evidence are conspicuously missing. We attempted to assess the quality of the non-randomized studies using a well-known validated instrument (Newcastle–Ottawa Scale); the quality was really low. A number of studies did not report quantitative results; conclusions often did not match the statistical result. We still do not have experimental evidence from RCT, in which an intervention that reduced GBV also significantly reduced HIV risk.

Observational studies

The recognized problem of non-experimental studies, of course, is to separate between shared risk factors for GBV and HIV infection, and the aetiological role of GBV in a linear concept of HIV infection. Most of the evidence for the association comes from cross-sectional studies, linking a report of GBV and a report of HIV. These cross-

sectional studies present the well-known conundrum about the direction of causality. It is hard to tell from this design if people who experience GBV actually do go on, as a consequence, to contract HIV. Two types of study help to break this deadlock. First, follow-up studies find that many GBV survivors become HIV positive. Second, several cross-sectional studies consider sexual abuse in childhood as an HIV risk factor.

Reporting gender-based violence

The underreporting of GBV is a serious problem in surveys [141]. As reporting rates might vary in relation to risk factors, it can be a source of bias. A major determinant of GBV reporting in surveys is the quality of training of the fieldworkers [142]. A study in Lesotho showed that other contexts were also important: women living in GBV awareness project areas, presumably reflecting increased awareness, were more likely to report a history of sexual violence [143].

Non-supportive studies

Some studies found only weak associations between childhood abuse and HIV status [42,144]. Several others found only weak differences between HIV-positive and HIV-negative groups in reporting non-partner violence [29,49,53,100]. Cohen and colleagues [42] reported no difference in 'lifetime prevalence of domestic violence' between women with HIV and those without, although they reported a strong relationship between CSA and HIV high-risk behaviours. Koenig *et al.* [75] found that the proportion of pregnant women reporting violence was no higher among HIV-positive women than among HIV-negative women.

Future research

Further high-level operational research is needed. The way to demonstrate the size of impact of reduced GBV on HIV is with a series of RCT [145]. Beyond the need to clarify the direction of association between HIV and GBV, these trials would assess the dynamics and gain directly from a reduction of GBV, indirectly by reducing the number of choice-disabled or indirectly by intervening in one or more of the behavioural implications of GBV. They would also provide crucial information on the feasibility and cost implications of preventing GBV or its consequences for HIV.

The scope and types of studies we believe are needed are outlined below. Studies along these lines may already be underway in universities and other bodies in the region. (1) Subgroup analysis in ongoing trials: As there are already several well-designed trials of HIV prevention interventions currently underway that are not specifically addressing GBV, it makes sense to do subgroup analysis of these trials to examine the impact of the interventions among GBV survivors. This can provide useful information with very little investment. (2) Cluster interventions and measurement: Almost all HIV prevention

research focuses on individuals and ignores the powerful influence of communities and networks. A non-randomized intervention study [122] and one randomized intervention [127] provide examples of community and network interventions. (3) Complex interventions: Most RCT on AIDS prevention focus on the impact of single interventions rather than a calculated mix of synergistic actions. In reality, all southern African countries implement complex interventions to combat AIDS and the question one has to answer concerns the added value of each intervention, or its impact in the face of all else that is going on. (4) Economic analysis should accompany these studies. This is relevant not only in relation to implementation costs, but because economic empowerment is a major aspect of prevention.

Several areas of research focus are likely to be important: (1) Choice-disability: few current HIV prevention programmes address the needs of the choice-disabled, those who have no agency to implement prevention decisions or access to health services when they need them [146]. This seems to be the major dynamic underwriting the association between GBV and HIV. Revictimization compounds this dynamic. The results could be relevant to health policy in many other settings [147]. This could be included with other research – asking, for example, how to increase the relevance of condom promotion or male circumcision for the choice disabled. (2) A second promising focus would be with HIV-discordant couples, when these cohorts are available. Reduction of GBV in this extremely high-risk group could provide evidence of much wider relevance but, because of the very high seroconversion rate, studies could be of modest size. (3) The interaction between prevention initiatives is also important. There is currently investment in HIV prevention by government health services, schools, non-governmental organizations, traditional healers, churches and international aid groups. They nearly all miss the same group – survivors of GBV. There are also widely used interventions that could have negative GBV outcomes. Fear-based messages, for example, against multiple partners, can increase the stigma associated with HIV/AIDS, with far-reaching consequences for testing, disclosure and indeed GBV. Male circumcision does not address the issue of GBV. In the context of widespread GBV, it is imperative to question the assumption that HIV risk education can only have a positive effect. (4) Research on access to treatment: there is a sparse literature on the effects of GBV and treatment and presumptive treatment in cases of rape [148]. Just as the choice-disabled are unable to implement their decisions about primary and secondary prevention, they are unable to obtain access to antiretroviral therapy. (5) Research on GBV affecting men: the stereotype that women are the victims and men the villains [149,150] offers a poor summary of GBV. In southern Africa, at least up to the age of 14 years, boys experience as much sexual violence as their female counterparts [57]. Male abuse of

men is more common than female abuse of men and, because of the trauma of forced anal sex, carries a higher HIV risk. Female violence, including sexual violence, against men is recognized in all southern African countries. If it is true that the greater GBV impact on HIV is through indirect mechanisms – choice disability and self esteem – then female perpetrated GBV could be important in the epidemic. (6) Research on perpetrators: more studies targeting perpetrators are needed to understand the relationship and dynamics, with a view to understanding intervention spaces, between perpetrators and HIV. On the other side of the GBV coin are the perpetrators whose proclivities put them at special risk and make them key drivers of the epidemic. It is possible that perpetrators understanding better their own HIV risks could help to motivate a reduction in sexual violence.

Building African skills in gender-based violence–HIV planning and research

Most GBV research comes from north America. This review faced problems identifying studies from southern Africa, particularly RCT. A recent systematic review of RCT on HIV and AIDS prevention in Africa concluded that the small number of trials in Africa is not commensurate with the burden of disease there [151]. There is an urgent need for African skill development in RCT. Several non-governmental organization and university-based initiatives are under way; this needs full government, regional and international commitment. Relevant beyond GBV to a wide range of HIV prevention issues, skill development can be a focus at several levels: (1) Policy and political: appreciation of the value of and the way to use local high quality evidence related to GBV and its role in the epidemic can be transferred in brief executive retreats, which could be regional or national. (2) Officers in national AIDS commissions and Ministries of Health need more detailed knowledge of research protocols and options, to engage with externally motivated research that should be adapted to local conditions. Short courses can transfer the skills needed for detailed interaction on AIDS prevention research, with a special focus on GBV. A national or regional consensus team established to standardize instruments and to define and refine structured outcomes can build local skills as well as match externally motivated research to national needs. (3) Prevention implementation research: reduction of GBV is measurable; so too are many of its indirect effects. Increasing the proportion of the population that can choose existing prevention options can be measured in terms of abstinence, condom use or reduced concurrency. It is essential that Africans gain experience and expertise in researching prevention initiatives. There is no reason why southern African scientists should not be the world leaders in AIDS prevention implementation research: a combination of in-service internships, degree courses and fully funded research posts could help to bring this to pass. A

permanent university research chair in GBV–HIV in each one of the eight hyperendemic countries could cost less than US\$10 million all told. (4) Community readiness and engagement is a crucial capacity for AIDS prevention. Collective and cluster interventions can be less expensive, easier to measure and easier to interpret. A spin-off of this research approach is the increased readiness of communities for serious integrated AIDS prevention. (5) Media sensitization and training: much has been done in the region to use mass media for ‘edutainment’ and awareness programmes. There is also room for awareness in the media community of the GBV dimensions of HIV and AIDS.

Policy and programme actions

A detailed review of the relevant current policies and programmes in the HIV hyperendemic countries of southern Africa would require a separate paper of equal length to this one. In general, one may say that there is increasing recognition of GBV as a public health problem in the region. In a number of the hyperendemic countries, national policies already cover aspects of the prevention of GBV, although programme implementation often lags behind. There is much less recognition of GBV as a key area for prevention as part of national government HIV programmes: the two issues of GBV and HIV are mostly seen as separate and are handled separately.

Policy and policy discourse

The entry point is to recognize that GBV increases HIV risk directly, through trauma, but also indirectly through increasing high-risk practices. GBV survivors are at high risk, but so are GBV perpetrators who often pick on survivors of previous GBV, who are much more likely to be infected. We need to address the issues of both victims and perpetrators. GBV is actionable as a risk factor for HIV – the policy paradigm must address primary prevention (stopping the risk by reducing GBV), secondary prevention (stopping GBV, when this occurs, leading to HIV) and tertiary prevention (reducing the consequences of HIV). (1) Legal review: policies in all the hyperendemic countries should ensure that laws cover forms of GBV including rape and CSA, and failure to disclose HIV status. This would provide a supportive environment for a reduction of GBV and choice disability. (2) Policy review: the HIV and AIDS prevention policies of each country should be reviewed to clarify their position on GBV–HIV. Key questions include: does the policy recognize the role of GBV on the HIV risk of victims; does it recognize the special HIV risk and subsequent role of GBV perpetrators; does it deal adequately with issues of primary prevention of GBV and HIV. Prevention of GBV should be promoted as a national and regional HIV prevention issue. (3) GBV and HIV prevention bodies in the United Nations and in national governments are usually quite separate at present. These ‘silos’ are unhelpful and partly to blame for the low position of GBV–HIV on policy agendas. Concerting of

these forces could have a positive effect on the prevention of both GBV and HIV. (4) At present, much AIDS prevention in southern Africa is driven by international donors. GBV reduction and the amelioration of its indirect effects on the epidemic are not manageable as a vertical programme, although vertical programmes are attractive to some local and donor decision-makers. It is necessary to engage with the advocates of prevention to increase their understanding of GBV and its role in the epidemic. Asking policy questions about the relevance of campaigns or prevention programmes for the choice-disabled can reduce the current trend of donors to invest mainly in prevention exclusively for the choice-enabled, those who can implement their prevention decisions.

Programmes

Each country should commit resources to socializing (communicating) the available information on GBV and HIV among prevention stakeholders. The exact cultural underpinning of the GBV–HIV dynamic may be different in different parts of the region, and there is an urgent need for country-specific information on what it takes to effectively tackle GBV or to reduce its effects on HIV. Effective GBV prevention is likely to include a structural component such as access to credit or earnings, and a GBV awareness component covering GBV survivors, potential GBV victims and GBV perpetrators.

Legal reform

Countries where the legal framework is out of step with what is needed for GBV prevention and dealing with cases of GBV will need to promulgate new laws, to provide training for service providers (including police and health workers), and to implement knowledge translation programmes to involve the public in the legal reform. Sharing of experience within the region is important.

Scaled-up primary prevention programmes are needed, to focus on reducing risk factors for GBV and consequent HIV risk. Programmes should be implemented in collaboration with bodies already working on GBV prevention. They should include structural and awareness/education elements, programmes in schools, a focus on men (as perpetrators and as victims of CSA), emphasis on resilience, and positive role models.

Secondary prevention programmes hinge on recovery from GBV – interventions can increase the resilience of people who experienced GBV but who are not yet HIV positive. Psycho-educational interventions can also improve the negotiating skills of those at risk of GBV. Longer term prevention strategies for the reduction of HIV infection independent of any reduction in GBV, such as male circumcision, could play a role.

Tertiary prevention of GBV includes making it easier to report abuse, to get support once abused and to increase deterrents for perpetrators. Given the sad reality that only

one in five cases might be reported, one in four of those go to court, and of those only a minority of perpetrators are convicted, judicial processes are unlikely to play a role in decreasing overall GBV. Some advocate zero tolerance for CSA in schools, with the suspension of teachers accused of CSA and the sacking of those convicted; but the potential for false accusations needs fuller consideration.

Programmes focused on perpetrators could increase their awareness of their own safety and, perhaps in time, reduce the distain for the safety of others that is often part of GBV and transactional sex.

In conclusion, there is now convincing evidence that GBV is an important cause of HIV infection, largely indirectly through choice disability and increased risk activities. GBV is an important part of the reason for the shape of the epidemic in southern Africa and the high rates of HIV infection in young women and girls. GBV is actionable and evidence is emerging that GBV reduction can reduce HIV incidence among women. Further research can identify the most effective methods to reduce both GBV and HIV. Meanwhile, existing evidence indicates policy review and programme actions that should be taken now.

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