2009

Concurrency driving the African HIV epidemics: where is the evidence?

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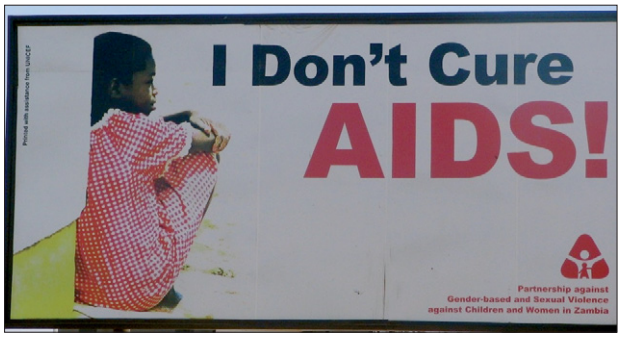

Figure: HIV/AIDS education poster, Lusaka, Zambia

problems, substance abuse, legal systems, and sometimes the societal tolerance of sexual violence.[1]

However, studies do suggest that there are beliefs that HIV can be cured through sexual intercourse with virgin youth. A qualitative study from Zambia examining problems of HIV-affected women and children cited existence of this belief,[2] and a roadside sign in that country certainly suggests that the belief is common enough to warrant an educational campaign (figure). Lema[3] and Meursing[4] discuss the existence of this belief, mainly in terms of traditional healers encouraging sex with virgin youth to cure a disease. Meursing[4] presented two case studies of young girls who became infected with HIV because of "cleansing" practices and concluded that this practice could be widespread. Another study suggested that a contributing factor to sexual abuse in young virgins is the belief that they are less likely to be HIV-positive.[5]

It is true that the references to this belief are largely anecdotal and there is a clear need for rigorous research on such belief structures. The extent to which such beliefs might have a motivational role in sexual violence, and how such practices are distributed across countries and regions needs to be established. However, the frequency with which this myth is suggested in studies and from anecdotal reports by field workers in several countries make it a potential influencing factor that should not be overlooked or disregarded.

We declare that we have no conflicts of interest.

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1 Jewkes R, Abrahams N. The epidemiology of rape and sexual coercion in South Africa: an overview. *Soc Sci Med* 2002; **55:** 1231–44.
2 Murray, LK, Haworth A, Semrau K, et al. Violence and abuse among HIV-infected women and their children in Zambia: a qualitative study. *J Nerv Ment Dis* 2006; **194:** 610–15.
3 Lema VM. Sexual abuse of minors: emerging medical and social problem in Malawi. *East African Med J* 1997; **74:** 743–46.
4 Meursing K, Vos, T, Coutinho O, et al. Child sexual abuse in Matabeleland, Zimbabwe. *Soc Sci Med* 1995; **41:** 1693–704.
5 Madu SN, Peltzer K. Risk factors and child sexual abuse among secondary school students in the Northern Province (South Africa). *Child Abuse Neglect* 2000; **24:** 259–68.

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James Shelton's "Why multiple sexual partners?" Comment (Aug 1, p 367)[1] begins with the statement that "multiple sexual partnerships—particularly overlapping or concurrent partnerships—lie at the root of the generalised HIV epidemic in southern and eastern Africa." Yet an objective reading of the available data suggests that the evidence is far from conclusive.[2]

Defining and measuring concurrency is difficult and studies that measure sexual behaviour and individual or community levels of HIV suffer from the temporal problem that concurrency is generally measured over the previous year (or shorter time period), whereas HIV infection might have occurred several years earlier. To support the concurrency hypothesis, we need a precise definition of concurrency, a way of measuring it, and a significant association between the measured concurrency and the prevalence or incidence of HIV, controlling for potential confounders.

A four-city African study actually found lower rates of concurrency in places with larger HIV epidemics,[3] and a study using nationally representative surveys in 22 countries[4] (all but one of which was in Africa) concluded that "the prevalence of concurrency does not seem correlated with HIV prevalence at the community level or at the country level, neither among women nor among men." Additionally, Wellings and colleagues[5] reviewed global sexual behaviour and could not find sufficient data to assess whether rates of concurrency differ across the world.

Adequate empirical evidence is urgently needed to assess the extent to which concurrency might or might not be driving the sub-Saharan African epidemics.

We declare that we have no conflicts of interest.

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1 Shelton JD. Why multiple sexual partnerships? *Lancet* 2009; **374:** 367–68.
2 Lurie M, Rosenthal S. Concurrent partnerships as a driver of the HIV epidemic in Sub-Saharan Africa? The evidence is limited. *AIDS Behav* 2009; published online June 2. DOI:10.1007/s10461-009-9583-5.
3 Lagarde E, Auvert B, Caraël M, et al. Concurrent sexual partnerships and HIV prevalence in five urban communities of Sub-Saharan Africa. AIDS 2001; **15:** 877–84.
4 Mishra V, Bignami-Van Assche S. Concurrent sexual partnerships and HIV infection: evidence from national population-based surveys. http://www.measuredhs.com/pubs/pdf/WP62/WP62.pdf (accessed Aug 5, 2009).
5 Wellings K, Collumbien M, Slaymaker E, et al. Sexual behavior in context: a global perspective. *Lancet* 2006; **368:** 1706–28.

Author's reply

I completely agree with Mark Lurie and colleagues that we need more research to understand better concurrent sexual partnerships. But I find their presentation of evidence rather selective. Actually, the evidence of a pivotal role for concurrent or overlapping partners in generalised heterosexual epidemics is compelling. Moreover, Lurie and colleagues offer no credible alternative explanation.

In one sense, the pivotal role of concurrent partnerships is rather