

HIV Sero-discordance Among Heterosexual Couples in Sub-Saharan Africa

Introduction

Protection of uninfected partner is an acknowledged best practice in HIV prevention. This best practice is best implemented among HIV sero-discordant couples. Although it is known that the problem of heterosexual discordant couples is huge in sub-Saharan Africa, it has not received much attention in the literature. Most of the studies that exist on this subject have been conducted in more developed countries, and a significant proportion of such studies were carried out among homosexual couples. Because of major differences between the type of HIV sero-discordant couples in developed and less-developed settings, knowledge gained in that setting cannot be easily applied in the Africa sub-region. For example, whereas HIV sero-discordant couples in more developed settings are likely to know their HIV status, only a tiny proportion of sero-discordant couples in sub-Saharan Africa settings actually know their status. When sero-discordant couples know their HIV status, it is possible for them to take actions that prevent the other partner from becoming infected. Where such knowledge of infection status is not available, the probability of sero-conversion is high as little or no preventive action is taken, thus increasing the level of prevalence and its attendant evils.

The objective of this study is to investigate the level of HIV sero-discordance among couples in selected high-prevalence countries in sub-Saharan Africa. We plan to investigate their socioeconomic and other background characteristics (who they are, where they live, what their level of education is, what their fertility and contraceptive behaviors are, etc.).

Data and Methods

Population-based HIV sero-survey data from the Demographic and Health Surveys project are analyzed. These surveys include AIDS Indicator Surveys (AIS) which are conducted in selected countries in the region. The countries selected for this analysis are Cameroon, Kenya, Lesotho, Malawi, Tanzania and Uganda. The selection criterion is that the HIV prevalence rate should be at least 5% and the data must be available for analysis. Because of the geographic distribution of HIV prevalence in sub-Saharan Africa, most of these countries are in East and Southern Africa. Only Cameroon is in West Africa.

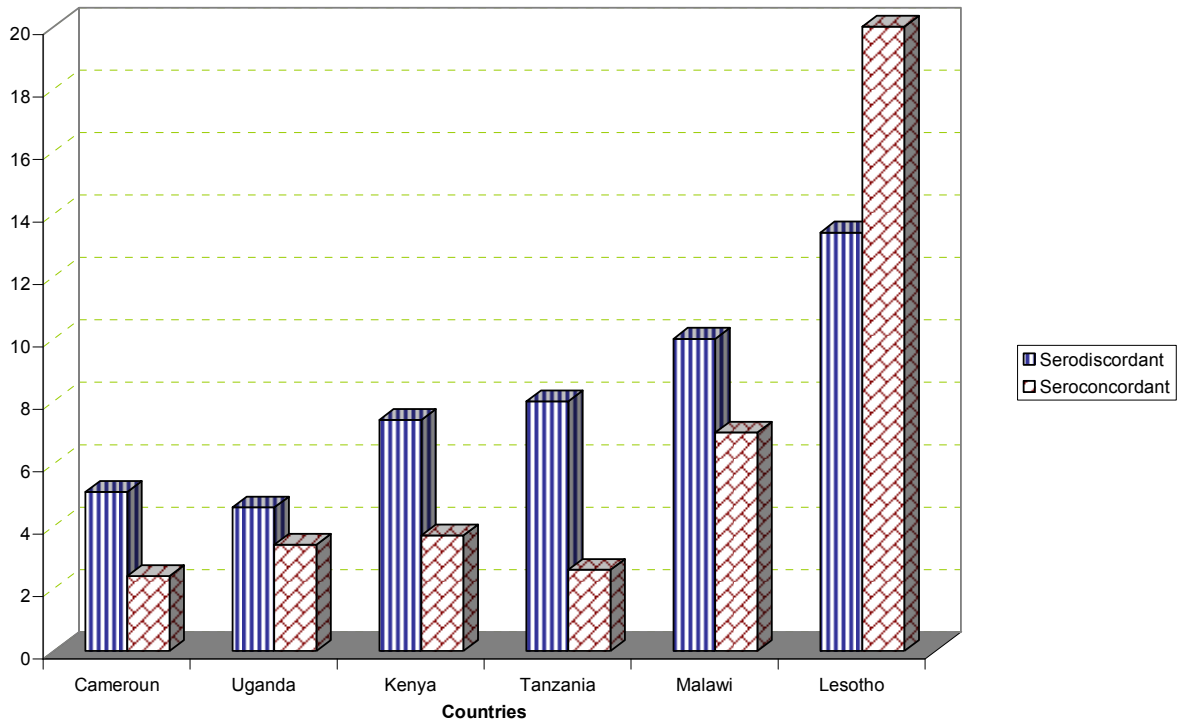
Although we intend to conduct multivariate analysis of the data, the first attempt is to understand the nature of HIV sero-discordance among couples in these countries: Who are these sero-discordant couples? What is their age distribution? What are their educational and socioeconomic characteristics? Are men or women more likely to be the infected partner?

Because HIV epidemic in sub-Saharan Africa is believed to be male-led, I expect that the proportion of couples where the man is the HIV-infected partner to be higher than those where the woman is the infected partner. The only exception is likely to be countries with a mature or generalized epidemic where most of the first-generation HIV infected men have died. Also because the proportion of women who are HIV-positive in younger ages (below 15) tends to be higher than men, I expect that young women are more likely to bring infection into their marriages, and thus I expect that the proportion of couples where the woman is the infected partner to be high among younger couples. Because previous studies have shown that HIV prevalence is higher in urban areas, among those with more wealth, I expect that the proportion of heterosexual couples that are sero-discordant to be higher among those who have higher education. I also expect the level of male-infected sero-discordant couples to be higher in rural than urban settings mainly because of the male-female imbalance in educational distribution, economic opportunities and higher prevalence of polygyny.

Results

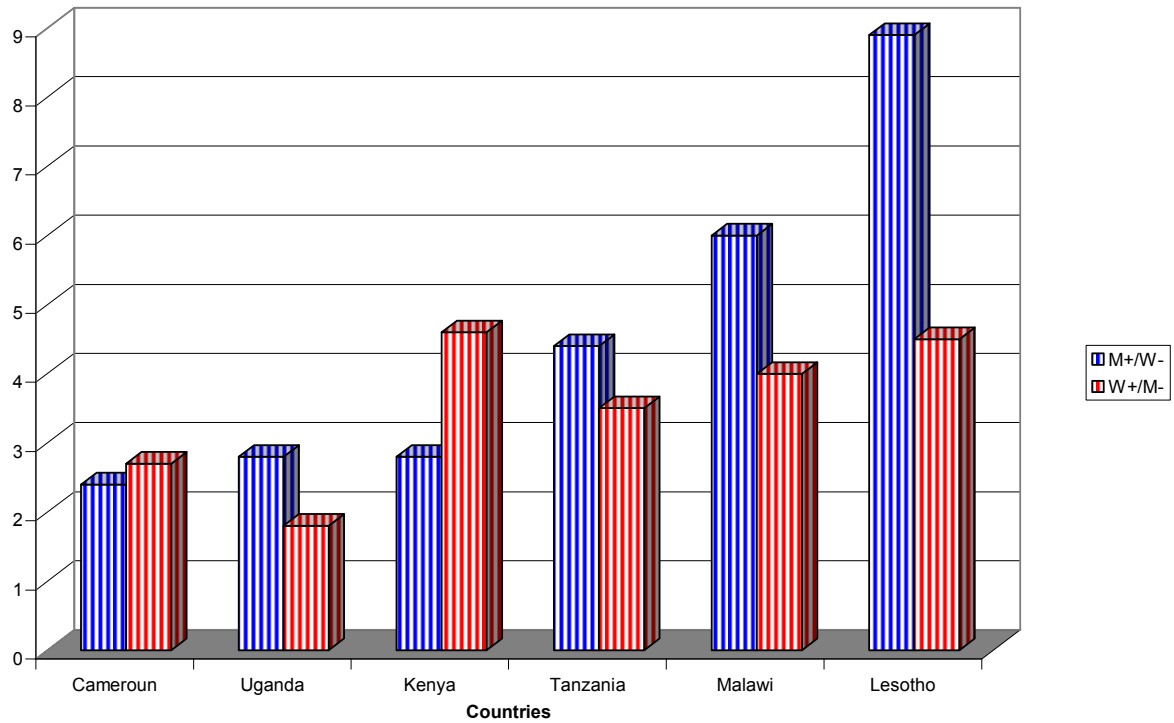
First, the proportion of heterosexual couples that are HIV sero-discordant is much higher than the proportion where both couples are HIV-positive. The only exception is in Lesotho. In Tanzania and Kenya, the proportion of sero-discordant couples is at least twice as high as the proportion of sero-concordant couples.

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The analysis also shows that in most cases where a couple is HIV sero-discordant, the man is the infected partner. In Lesotho for example, the proportion of HIV-sero-discordant couples where the man is the infected partner is twice as high as couples where the woman is the infected partner. In Cameroon, there is not real difference between the proportion of sero-discordant couples where the man is the infected partner and those where the woman is the infected partner. In Kenya, the proportion of sero-discordant couples with female-infected partner is 60% higher than the proportion with male-infected partner.

HIV Serodiscordance Among Couples by Sex of Infected Partner



I intend to discuss this pattern by age, education and wealth gradients. I also plan to look at the rural urban differences, particularly looking at the differences in sero-discordant patterns between the big cities and rural areas. After this, I would use multivariate methods to pull the key messages out of the various patterns. I will discuss the implications of this high level of HIV sero-discordance for the trajectory of HIV/AIDS in sub-Saharan Africa. I would offer suggestions for policy makers and program managers in the region.