

Beyond Sugar Daddies: Intergenerational Sex and AIDS in Urban Zimbabwe

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Abstract In a survey of 1,313 men reporting on 2,465 partnerships recruited at beer halls in Harare, Zimbabwe, 2.5% met a definition of “sugar daddy”: men with a non-marital partner at least 10 years younger and under 20 years old, and exchanged cash or goods for sex. Men engaging in intergenerational sex with a teenage woman had similar HIV prevalence, incomes, and condom use as men in other partnerships. Most men (62.3%) had partners 5 or more years younger, with wider age gaps in longer-term relationships. Condom use was less common within married and steady partnerships compared to casual and more common with younger women. The most common form of intergenerational sex, with the widest age gap and lowest condom use, occurs within marriages and steady partnerships. Such “conventional” intergenerational sex

may play the pivotal role in sustaining a generalized epidemic across generations and present the most difficult challenge to prevention.

Keywords Sugar daddy · Intergenerational sex · Cross-generational sex · Zimbabwe · HIV

Introduction

Higher prevalence of HIV among young women compared to young men is well documented in sub-Saharan Africa. Numerous surveillance and population-based studies find 15–19-year-old African women many times more likely to be infected than their same-age male peers, and HIV prevalence among very young women in the region reaches astonishing levels [1–7]. HIV prevalence disparities by gender and age may be thought of as a complex interplay between four factors: biological vulnerability, multiple and concurrent partnerships, age differences between partners, and power imbalances.

Epidemiological and physiological evidence support that women are biologically more susceptible to sexually transmitted infections and HIV [6–8], especially young women and girls at an early age of sexual debut [9, 10]. At the same time, older men’s multiple and concurrent sexual relationships are hypothesized to create dense sexual networks that fuel HIV transmission [11–13]. The risk inherent in these sexual networks may be heightened by age gaps between partners when younger women have relationships with older men who are more likely to be HIV infected than younger men [3, 5, 10, 14, 15]. Finally, these age differences may also be tied to social hierarchies and social norms that reinforce unequal power dynamics between women and men. Such power imbalances may

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underlie many of the challenges women face negotiating safe sex with their male partners [16–20]. Together, these factors point to age differences in male–female relationships as conspiring to make young women most vulnerable to HIV infection in sub-Saharan Africa, underscoring the need for combined approaches to AIDS prevention that incorporate biological, behavioral, and structural interventions [21–23].

Although the interplay between age gaps and the HIV epidemic is complex, the phenomenon of intergenerational sex often gets distilled to the catch phrase of “sugar daddy” [24, 25]. Sugar daddies garner more attention in the popular media than they are defined and quantified in the scientific literature. The relationship may be characterized as an intersection of intergenerational and transactional sex between adolescent girls and older adult men. The paradigm is one of poor, young women with older, richer men who provide them with some of their survival needs as well as luxuries (e.g., cell phones). Qualitative research indicates the phenomenon of adult men engaging adolescent girls in economically dependent relationships is widespread [4, 26–34]. Unprotected sex between adolescent girls and sugar daddies is reported to be high given the power dynamics and economic asymmetry that prohibit girls from negotiating condom use [4, 27, 30, 31, 35]. However, the dearth of quantitative data prevents illumination of the true magnitude of the sugar daddy problem and for a proportionate response in HIV prevention messages and interventions.

The present study provides an epidemiological analysis of the prevalence of sugar daddies in an urban, southern African setting. In addition to attempting a measurement of the sugar daddy phenomenon, we examine how other types of intergenerational sex may be implicated in the AIDS epidemic of southern Africa.

Methods

Study Design and Study Subjects

Our methods comprise secondary analysis of baseline data collected for the evaluation of an HIV prevention intervention among men attending beer halls (beer hall patrons) in peri-urban, high-density neighborhoods of Harare, Zimbabwe. These neighborhoods are where the majority of Harare’s population resides. Beer halls are a widespread social institution in Zimbabwe with similar venues throughout the region and thus provide an opportunity to interview a large sample of men from a broad section of southern African society.

Recruitment of men attending any of 43 beer halls in Harare, Zimbabwe took place from October 2002 to

January 2003, a time period that corresponds to the peak of Zimbabwe’s epidemic [36]. A cross-sectional sample was obtained using time-location sampling (TLS) as previously conducted for a study of the same target population [37]. TLS is a spatial-temporal methodology developed for sampling persons attending alcohol drinking establishments and other venues, is currently used in the National HIV Behavioral Surveillance system of the United States, and employed to sample diverse populations at risk for HIV throughout the world [38, 39]. Briefly, the method entails (1) constructing a comprehensive sampling frame of venues and their hours of attendance, in this case all beer halls owned by a single commercial operator which accounted for approximately 75% of beer halls in Harare, (2) creating a calendar of 4-h recruitment events, (3) randomly selecting beer halls to fill each calendar event, and (4) assessing the eligibility of every third man entering the beer hall during the sampled time periods.

Study eligibility criteria were 18 years of age or older, not intoxicated, and crossing into an “intercept zone” outside the entrance of the beer hall. Persons who approached recruiters to participate were not considered eligible but were given free condoms, HIV prevention education materials, and vouchers for HIV testing. As a service to beer hall patrons, two HIV educators worked inside each beer hall and provided HIV prevention information, free condoms, and small group question-and-answer sessions to beer hall patrons. Eligible participants provided written informed consent and the study protocol was reviewed and approved by the Medical Research Council of Zimbabwe, the Biomedical Research Institute in Zimbabwe, and the Committee for Human Research of the University of California, San Francisco.

Survey Measures

Although the survey was not designed to specifically test hypotheses on sugar daddies, data were available to describe age gaps and characteristics of sexual partnerships of men enrolled. An interviewer administered, standardized questionnaire was used to collect demographic characteristics and detailed information for each sexual partner (up to 7) in the preceding 6 months. The questionnaire was co-developed in English and Shona, forward and backward translated, and pilot tested and revised incorporating knowledge gained from an earlier pilot study of the same target population [37]. For each partner, participants were asked to provide information about the partner’s age, relationship or partner type (wife, steady, casual, one-off or one night stand), and sexual risk behavior with each partner, such as frequency of sexual contact, condom use, and whether the man was drunk while having sex. Our variable for monthly alcohol consumption was measured as number

of days drinking in the last 30 days, which was then grouped into four categories based on the context of drinking patterns at the beer halls and their associations with intergenerational sex: no drinking at all in the last 30 days (0 days), the number of days that corresponds to potentially only weekend drinking or less (1–7 days per month), the number of days corresponding to potentially more than just weekends (8–12 days per month), and the number of days corresponding to many potential mid-weekdays in the month (13–30 days). Of note, the last category was an indicator of heavy drinking and of engaging in intergenerational sex. To measure exchange of cash or goods for sex, men were asked, “did you give cash or goods for sex in the last 6 months” for each partner listed. After the interview, HIV pre-test counseling was conducted and blood was drawn for HIV testing. At the time of the blood draw and pre-test counseling, participants were encouraged, but not required, to make an appointment to receive their HIV test results. Test results, post-test counseling, and referral to post-test support services were provided by our study staff. Serological testing was conducted following standardized algorithms using approved assays at the University of Zimbabwe, Department of Community Medicine Laboratory.

Analyses

We conducted our analysis accounting for data collected on two levels: the individual respondent as the unit of observation ($N = 1,313$) and the partnership as the unit of observation ($N = 2,465$). At the individual level, we explored definitions to classify men as a sugar daddy and measured their prevalence among men in our sample. The aim was not to redefine the sugar daddy notion but instead to specify it in a way that allowed for a quantitative analysis of the prevalence and characteristics of sugar daddies in this population. Criteria considered for our definition included years of age gap between the male respondent and each of his sexual partners (in increments of 5 years), the age of the female sexual partner, the type of partner, the age of male respondent, and if the respondent ever gave cash or goods for sex with the partner. After measuring the prevalence of sugar daddies using these criteria, we then examined the correlates of a working definition of intergenerational sex with a teenage woman: a man having at least one non-wife, female partner under 20 years of age, and being at least 10 years older than that partner. In bivariate analysis, we examined demographic characteristics, HIV serostatus, sexual risk behavior during the past 6 months, exchange of cash or goods for sex, and alcohol use as correlates of intergenerational sex with a teenage woman using the chi-square test or ANOVA. We considered all variables that were significant at the $P < .05$

level in bivariate analyses as candidate predictor variables in multiple logistic regression analysis and assessed collinearity between all predictor variables. Multivariable analysis then took into account the partnership level of analysis (i.e., that men may have multiple partnerships) using generalized estimating equations (GEE). Of note, some predictor variables pertained to the individual male respondent (e.g., age, marital status, HIV serostatus) while other variables were dependent on the partnership (e.g., unprotected sex, cash or goods for sex, sex while drunk). We selected a final model based on the convergence of forward and backwards stepwise regression selection. All analyses were done using the SAS statistical package (SAS version 8.0; Cary, NC, USA).

Results

Key demographic characteristics of the overall sample are summarized in Table 1. A total of 1,313 men attending beer halls in Harare, Zimbabwe completed the behavioral survey and HIV testing. Median age was 30 years. Median monthly income was 25,000 Zimbabwean dollars, the equivalent of 31 US dollars at the time of the survey which was above the monthly minimum wage of approximately 11 US dollars. Nearly two-thirds (64.7%) of respondents had completed O-level education (equivalent to eleventh grade in the United States). The majority of respondents (60.2%) were currently married.

Among all men, 47.3% reported more than one sexual partner in the past 6 months; 43.0% of married men reported more than one sexual partner in the past 6 months. The majority (77.1%) reported at least one episode of unprotected sex in the past 6 months; however, excluding men having unprotected sex with wives this figure dropped to 48.0%. Giving cash or goods for sex to at least one sexual partner in the past 6 months was reported by 28.9% of men overall. More than half (54.8%) reported drinking alcohol at least 13 of the preceding 30 days; 20.6% reported drinking until intoxication on at least 8 of the preceding 30 days. Overall, 28.2% of men were HIV-positive—a figure close to the prevalence of HIV among women attending antenatal clinics in Zimbabwe at the time of the study [40].

Sugar Daddies and Sugar Daddy Partnerships

Several potential criteria to define sugar daddy relationships are presented in Table 2. Using age difference criterion alone, the majority (62.3%) of men reported at least one partner 5 or more years younger. The proportion drops as the age difference is increased to 10 or more years (25.1%), 15 or more years (8.7%), and 20 or more years

Table 1 General characteristics of male beer hall patrons in Harare, Zimbabwe, 2002–2003 (N = 1,313)

Variable	N	%
Age (years)		
18–24	349	26.6
25–34	575	43.8
35+	388	29.6
Education level completed		
None	10	0.8
Primary	114	8.7
Form 1–2	230	17.5
O level	849	64.7
A level	70	5.3
University	13	1.0
Other	27	2.1
Marital status		
Married	790	60.2
Single, never married	390	29.7
Separated/divorced	106	8.1
Widowed	27	2.1
HIV status		
Positive	370	28.2
Negative	942	71.8
Total number of partners in past 6 months		
0	106	8.1
1	586	44.6
2	300	22.9
3+	321	24.4
Ever engaged in unprotected sex in past 6 months		
Yes	1,010	77.1
No	300	22.9
Number of unprotected sexual partners		
0	302	23.0
1	730	55.6
2	187	14.2
3+	94	7.2
Ever gave cash or goods for sex in past 6 months		
Yes	379	28.9
No	934	71.1
Days drank alcohol in last 30 days		
0 days	64	4.9
1–7 days	209	15.9
8–12 days	320	24.4
13–30 days	720	54.8
Days drank alcohol until intoxication in last 30 days		
0 days	350	26.7
1–7 days	691	52.7
8–12 days	158	12.1
13–30 days	112	8.5

1—Some variables do not add up to 1313, due to missing data

2—Some percentages do not add up to 100, due to rounding

Table 2 Definitions of “Sugar Daddy” among male beer hall patrons Harare, Zimbabwe, 2002–2003 (N = 1,313)

Characteristics	N (%)
Age gap \geq 5 years	818 (62.3)
Partner not wife	481 (36.6)
Partner not wife, partner is teen (<20 years)	210 (16.0)
Partner not wife, partner is teen (<20 years), gave cash/goods for sex*	70 (5.3)
Age gap \geq 10 years	330 (25.1)
Partner not wife	208 (15.8)
Partner not wife, partner is teen (<20 years)	80 (6.1)
Partner not wife, partner is teen (<20 years), gave cash/goods for sex*	33 (2.5)
Age gap \geq 15 years	114 (8.7)
Partner not wife	71 (5.4)
Partner not wife, partner is teen (<20 years)	25 (1.9)
Partner not wife, partner is teen (<20 years), gave cash/goods for sex*	16 (1.2)
Age gap \geq 20 years	40 (3.0)
Partner not wife	25 (1.9)
Partner not wife, partner is teen (<20 years)	10 (0.8)
Partner not wife, partner is teen (<20 years), gave cash/goods for sex*	7 (0.5)

* Chi-square test for heterogeneity, $P < .001$

(3.0%). The proportions of potential sugar daddies drop to 16.0, 6.1, 1.9, and 0.8%, respectively, when adding the criteria that partners are not wives and are women under 20 years. Further adding the criterion that cash or goods were given for sex, the respective proportions drop to 5.3, 2.5, 1.2, and 0.5% for each respective age gap.

We identified 80 of the 1,313 men (6.1%) who met our putative, working definition of men engaging in intergenerational sex (i.e., at least one non-marital, teenage partner who was at least 10 years younger) in our sample. Of the total 2,465 partnerships described, 93 (3.8%) met our working definition.

Table 3 presents crude and adjusted odds ratios for variables significantly associated with men engaging in intergenerational sex with a teenage woman. In bivariate analysis, intergenerational sex prevalence peaked among middle-aged men (29–38 years) (OR 4.2 vs. other ages, 95% confidence interval [CI] 2.6–6.8, chi-square 38.5, df 2, $P < .001$) and was associated with men separated/divorced (OR 3.5 vs. other marital status, 95% CI 1.9–6.2, chi-square 18.1, df 1, $P < .001$), having three or more unprotected sex partners overall (OR 6.6 vs. 0–2, 95% CI

Table 3 Factors associated with men engaging in intergenerational sex with a teenage woman, Harare, Zimbabwe, 2002–2003 (N = 1313)

Variable	Crude OR (95% CI)	Chi-square, P value	Adjusted OR (95% CI)
Middle aged (29–39 years)		38.5, <.001	
No	Ref		Ref
Yes	4.2 (2.6, 6.8)		5.2 (3.1, 8.8)
Separated or divorced		18.1, <.001	
No	Ref		Ref
Yes	3.5 (1.9, 6.2)		2.7 (1.4, 5.1)
HIV status		1.7, >0.05	
Negative	Ref		
Positive	1.4 (0.9, 2.3)		
Total number of unprotected partners in past 6 months		55.9, <.001	
0–2	Ref		Ref
3+	6.6 (3.8, 11.3)		3.1 (1.7, 5.8)
Ever engaged in unprotected sex in past 6 months		7.0, <.01	
No	Ref		
Yes	2.8 (1.3, 5.9)		
Ever gave cash or goods for sex in past 6 months		70.6, <.001	
No	Ref		Ref
Yes	7.0 (4.3, 11.6)		6.2 (3.6, 10.8)
Days drank alcohol until intoxication in last 30 days		7.6, <.01	
0–12 days	Ref		
13–30 days	2.5 (1.3, 4.5)		

3.8–11.3, chi-square 55.9, df 1, $P < .001$), ever engaging in unprotected sex in the past 6 months (OR 2.8 vs. never, 95% CI 1.3–5.9, chi-square 7.0, df 1, $P = .008$), giving cash or goods for sex to any partner in the past 6 months (OR 7.0 vs. not, 95% CI 4.3–11.6, chi-square 70.6, df 1, $P < .001$), and drinking alcohol until intoxication at least 13 days in the past month (OR 2.5 vs. 0–12 days, 95% CI 1.3–4.5, chi-square 7.6, df 1, $P = .006$). We found no significant association with men engaging in intergenerational sex and HIV positive status, any occupations (including professionals and teachers), reported income, or time spent outside Harare (an indicator of having a residence in a rural area).

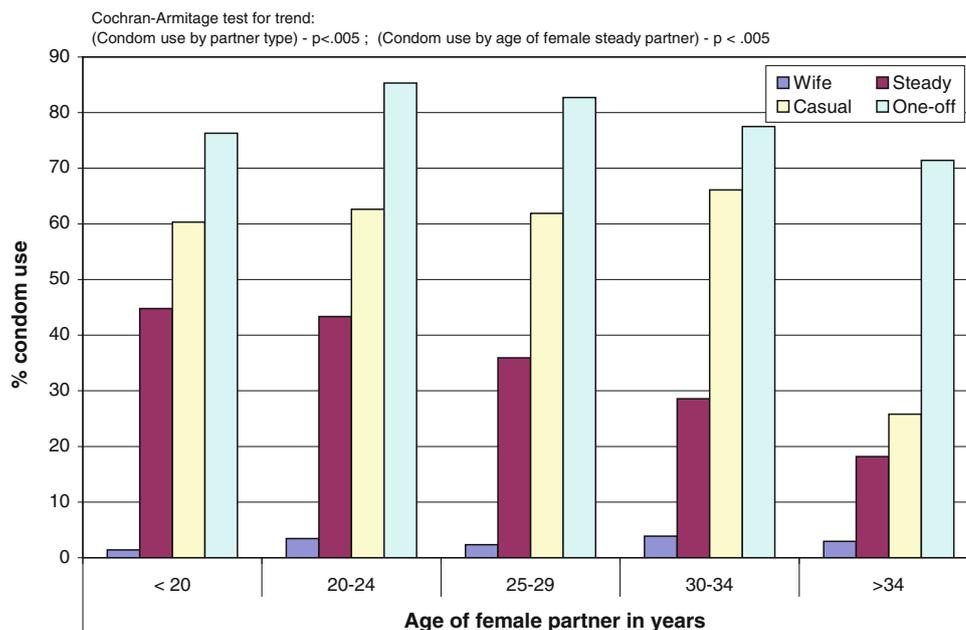
In multivariable analysis (also Table 3), men engaging in intergenerational sex remained significantly more likely among men between the ages 29–38 years (adjusted OR [AOR] 5.2; 95% CI: 3.1–8.8), those who were separated/divorced (AOR 2.7; 95% CI: 1.4–5.1), those who had at least 3 unprotected sex partners overall (AOR 3.1; 95% CI: 1.7–5.8), and who gave cash or goods for sex to any partner (AOR 6.2; 95% CI: 3.6–10.8). Of note, although men who had intergenerational relationships were more likely to give cash or goods for sex generally, we found this giving was not more likely to occur in the context of their relationships with teenage, non-marital partners 10 or more years younger. The multivariable analysis also indicated that men who engaged in intergenerational sex were not riskier than other men in

terms of having unprotected sex and having sex while intoxicated either generally or with their teenage partners.

Intergenerational Sex Beyond Sugar Daddies

We further explored age gaps and condom use in other types of intergenerational partnerships. Of the total of 2,465 partnerships, the mean age gap between male participants and any partner was 5.4 years, with the mean age gap differing significantly by partner type. The largest mean age gap was between male participants and their self-reported wives (6.8 years), followed by steady partners (5.7 years), casual partners (4.8 years), and one-off partners (3.6 years) (ANOVA, $P < .001$). Age gaps within sexual partnerships increased with increasing age of both the men and women; that is, older generations had larger age gaps within partnerships. In our study, 13.3% of men under age 35 years had one partner at least 10 years younger compared to 53.4% of men 35 and older. Regardless of the age of the female partner, condom use varied by partner type (Fig. 1). Condom use was more common with one-off and casual relationships than with steady girlfriends and wives across all ages of female partners. Condom use within marriage was significantly lower compared to other partnership types (chi-square 796.9, df 1, $P < .001$). Age was significantly correlated with condom use only within steady partnerships, and the

Fig. 1 100% Condom use by partner type, reported by 1,313 male beer hall patrons (2,465 partnerships), Harare, Zimbabwe, 2002–2003



relationship was *inverse*: the younger the age of the female partner the greater the use of condoms (Cochran–Armitage test for trend, $P = .005$).

Discussion

Popular conceptions and much qualitative research conducted to date contend that sugar daddies are widespread in many sub-Saharan African contexts. Our effort to quantify sugar daddy status among men in Harare suggests that this popular notion is not common in reality. Only 2.5% of men met the sugar daddy definition of having a partnership with an age gap of 10 or more years, with the female partner under 20 years, who is not a wife, and in which transactional sex occurred. We are aware of only one other study that attempted a definition and quantification of sugar daddy status. In Kisumu, Kenya, 2.1% of men had a non-wife teenage partner with an age difference of 10 or more years in which cash or gifts above the overall average were given [24]—a figure comparable to our own in Harare. In addition, older men who had non-marital teenage partners were not more likely to be HIV-infected than other men and unprotected sex was not more common with their teenage partners. Moreover, condom use increased with decreasing age of the woman.

Differences between our study and that of Kisumu highlight important limitations of our own data. Unlike the Kisumu study, our survey was not specifically designed to examine sugar daddy partnerships; we enrolled only men and data on female partners were based on men’s self-reported sexual relationship histories. We acknowledge the absence of half of the equation. Our sample was also not

designed to examine the prevalence of “sugar mama” relationships involving older adult women and teenage boys, which may also be of epidemiological significance. In addition, we did not collect detailed information on what amount of cash or types of goods were exchanged for sex. The questionnaire did not distinguish between cash or goods given explicitly for sex, and cash or goods given for romance, seduction, manipulation, or out of generosity. Our indicator of exchange may have been measuring more commercial sex worker types of interactions.

The sample was recruited from beer halls in Harare’s medium- to low-income neighborhoods and thus does not include many wealthy or elite men. However, the neighborhoods where the study was conducted are also where the majority of Harare’s population resides and the study therefore captured data from a large cross section of Harare’s male population. If sugar daddies are more common among the very wealthy, they would not comprise a very large proportion of the general population of Zimbabwean men. Moreover, we saw no trend for increased sugar daddy prevalence with increased income or with professional employment. Another potential bias may be under-reporting of young female partners. Our choice of age cut-off for defining young women did not include youth age 20–24 years. Repeating our analysis using this higher age cut off places 5.5% of men as sugar daddies. Other biases may have resulted in an over-estimation of the prevalence of sugar daddies. For example, alcohol use is associated with greater sexual risk behavior overall [37] and the sampling method may have included more men with greater numbers of sexual partners and therefore more younger female partners than non-drinking men. However, even after excluding one-off partners from our analysis of

sugar daddy partnerships, we found that there was still no association with any sexual risk behaviors, including giving cash or goods for sex, having sex while the man was drunk, or having unprotected sex.

Our study actually suggests the problem of intergenerational sex and the HIV epidemic pertains to a broader segment of society than implied by the popular notion of the sugar daddy. This is a significant issue because the widespread phenomenon of HIV prevalence being substantially higher among young women compared to young men can be both a result of intergenerational sexual relationships as well as a mechanism to sustain the age/gender disparity in the HIV epidemics of sub-Saharan Africa. Around the time of this study, HIV prevalence among women in Zimbabwe had peaked and was at higher levels than men in younger age groups but lower than men in older age groups [41], a common pattern in the region [42] (Fig. 2). When examining these age-gender differences, it becomes evident that partnership age gaps have significant implications for the perpetuation of the HIV epidemic. Due to the long period of infection, HIV prevalence accumulates with increasing age and older men are more likely to be infected than younger men. When older men partner with younger women, the direction of transmission is likely from man to woman. In closer age gaps, the direction of transmission is likely to be the reverse as young women have higher prevalence than their same-age male peers, thus completing the cycle of HIV infection from men to women to men, etc., as required to propagate a heterosexual epidemic. Given the factors of biological vulnerability in women and especially young women, multiple and concurrent partnerships of men, gender power imbalances, and the demographic phenomenon of populations in developing countries being predominantly young, then conditions are set for women to bear the greater burden of AIDS than men in sub-Saharan Africa. Our data support

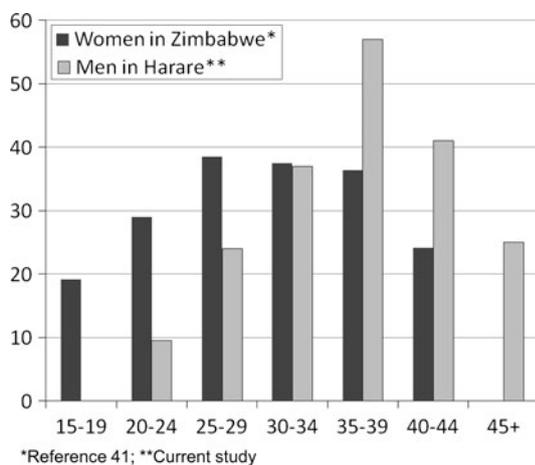


Fig. 2 HIV prevalence by age and gender, Zimbabwe

many aspects of this paradigm, with several added worries: an age gap of greater than 5 years was reported by the majority of men, intergenerational sex is far more common within marriage and more stable partnerships in which condom use is far lower, and the situation is not limited to upper socio-economic strata of men.

It is noteworthy that recent epidemiological data suggest that the HIV epidemic has crested in Zimbabwe and other sub-Saharan African nations, with the most dramatic declines occurring among young women age 15–24 years [1, 2, 36, 40]. These declines are accompanied by behavior change within this age group. New HIV infections are shifting to older age groups and the average age of infection will also increase with improved survival following ART scale-up. Some researchers assert that serodiscordant marriages and long-term partnerships may already account for the predominant part of HIV transmission in some areas [1, 2, 42]. In a household survey in Zimbabwe, for example, 13% of all cohabiting couples were HIV serodiscordant [42, 43].

To be clear, we do not assert that sugar daddies as conceived in popular culture are to be discounted. Rather, we posit that intergenerational relationships beyond the sugar daddy stereotype amount to a far greater public health threat, all the more so for their pervasiveness and insidiousness. The sugar daddy may be an easy scapegoat when few men actually fit the definition, and when fewer still are likely to identify themselves with that label. Addressing the HIV risk posed by more “conventional” intergenerational sex, inconsistent condom use in steady relationships, and for the long-term will be much more difficult.

One strategy to address these issues is to ensure that the risks associated with age-discrepant relationships are widely publicized [27]. Promoting age-symmetric relationships is another strategy, although this approach may be limited by the entrenched nature of age gaps within relationships, as well as the need to compensate for the benefits such relationships afford some women and men [29]. In addition, changes in social norms are needed so women have more leverage to negotiate safe sex across generational divides in all types of relationships. Men would gain from these changes as well, and, given current trends in the AIDS epidemic, addressing how age, gender, and economic disparities together shape both women’s and men’s risks of HIV infection is of paramount importance.

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