

Sexual risk behaviours of HIV-positive persons not receiving HIV treatment in Mombasa

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Background

Despite widespread prevention efforts, HIV continues to spread and new infections are being documented globally. Most prevention programs target at-risk populations such as sex workers, injection drug users, men who have sex with men, and HIV-positive persons receiving antiretroviral therapy (ART). Few interventions address people living with HIV and AIDS (PLHA) not receiving ART, who neither form a part of the visibly at-risk groups nor are included in the network of treatment programs. Hence, this group of 'healthy positives' have limited or no contact with health providers and prevention and care services.

Research Objectives

Researchers from the Population Council and the International Center for Reproductive Health (ICRH) undertook this study among PLHA in the community who were not accessing treatment services. Specific research objectives were to:

- Explore strategies to reach HIV-positive persons not on ART in the community;
- Understand their exposure to HIV prevention messages;
- Assess the level of knowledge and awareness of HIV infection, routes of transmission, prevention strategies, and the availability of treatment; and
- Examine the sexual behaviours of PLHA in the community who are not accessing ART.

In this poster we present findings pertaining to their sexual behaviours.

Methods

- Modified snowball sampling was used to recruit PLHA in the community not receiving ART using two different approaches:
 - Community Health Workers (CHW)**
Sixteen CHWs were selected across the four divisions of Mombasa; each CHW was asked to recruit 20 PLHA not receiving ART from their communities (Recruitment goal: 320).
 - HIV-positive peers from Post-Test Clubs (PTC)**
Forty peers were selected from eight PTCs in Mombasa; each peer was asked to recruit 12 PLHA not receiving ART from their communities (Recruitment goal: 480).
- A cross-sectional study design was used.
- Face-to-face interviews were conducted with PLHA recruited through CHWs and PTC peers using a structured questionnaire; self-reported sexual behaviours were recorded.
- Data was collected by trained interviewers using handheld computers (Dell Axim X51).
- Analysis:** Factors associated with unsafe, risky sex with sexual partners were assessed using multivariate logistic regression analysis controlling for intra-client clustering to account for repeated measures for multiple partners.

Definitions

- Regular partner:** A spouse or long-term live-in sexual partner.
- Casual partner:** A person the participant had sex with once or rarely.
- Sex worker partner:** A person whom the respondent paid in money or gifts in exchange for sex.
- Unsafe risky sex (URS):** Inconsistent condom-use with the partner in question over the past 6 months.
- Sexually transmitted infection:** An episode of genital (penile/vaginal) discharge or genital ulcer in the last 6 months.
- Internalized HIV stigma:** A measure of stigma about being HIV positive as perceived and experienced by the subject. The Berger Stigma Scale was used to measure this factor (Berger 2001)¹.

Key Findings

Socio-demographic profile of participants

- 77% female participants.
- Median age 33.5 (IQR: 28,39).
- 59% with primary education; 34% with secondary or higher education.
- 34% married or cohabiting; 45% widowed or divorced or separated; 21% single
- 76% unemployed.
- 43% diagnosed HIV positive within the past 12 months; 20% in past 12–24 months and 33% more than 24 months back.

Recruitment

- A total of 698 study participants were recruited into the study.
- CHWs recruited 345 participants, exceeding their target (107%). HIV-positive PTC peers were able to recruit 342 (71% of their target).
- There were no significant differences in the socio-demographic characteristics between the two PLHA groups recruited.

More than half of the study participants were sexually active in the last 6 months (Table 1).

- Over half the male (59%) and close to two-thirds of female participants (60%) reported sexual activity in the past 6 months.

Having multiple partners was common (Table 1).

Of the 413 sexually active respondents, 410 answered more detailed questions about the characteristics of each their most recent sexual partners in the past 6 months (up to a maximum of 6 sexual partners).

- Males reported a significantly higher number of lifetime partners than females (15 partners vs. 4 partners; $p < 0.001$).
- Almost half the male respondents and one-fifth of female respondents (46% vs. 19%; $p = 0.001$) reported 2 or more partners in the last 6 months.
- Some male respondents reported having only male partners in the last 6 months (12%); almost no female respondents reported sex with only females.
- The majority of respondents reported sex with only regular partners in the last 6 months. Female respondents were more likely to report sex with only regular partners compared to male respondents (80% vs. 62%; $p < 0.001$).
- Male respondents were more likely to report sex with only casual partners (11% vs. 8%) and only sex workers (7% vs. 2%) than female respondents ($p < 0.001$).
- Male respondents were significantly more likely to report different types of sexual partners (i.e., a regular partner and sex worker) in the last 6 months than female respondents (20% vs. 10%; $p < 0.001$).

¹Berger BE, Ferrans C.E., Lashley F.R. 2001. "Measuring stigma in people with HIV: Psychometric assessment of the HIV stigma scale," *Research in Nursing and Health* (24): 518–529.

Table 1 Sexual behaviours in the last months of PLHA not on ART (N = 698)

	Male (n = 164) %	Female (n = 534) %
Lifetime total partners (median, IQR) 1	15 (7,27)	4 (3,8)
Sexually active in the last six months	56	60
Number of partners in the last 6 months	(n = 90)	(n = 320)
One partner	54	81
Two or more partners	46	19
Mean number of partners in last 6 months if > 1 (mean, SD)	3.9 (4.4)	5.2 (6.3)
Sex of partners in the last 6 months	(n = 90)	(n = 320)
Only males	12	99
Only females	84	0
Both male and female	3	1
Type of partners in the last 6 months	(n = 90)	(n = 320)
Only regular partners	62	80
Only casual partners	11	8
Only sex worker partners	7	2
Mixed partners	20	10

Note: Sample sizes vary slightly because of missing data. ¹Excludes outlier responses of more than 500 partners.

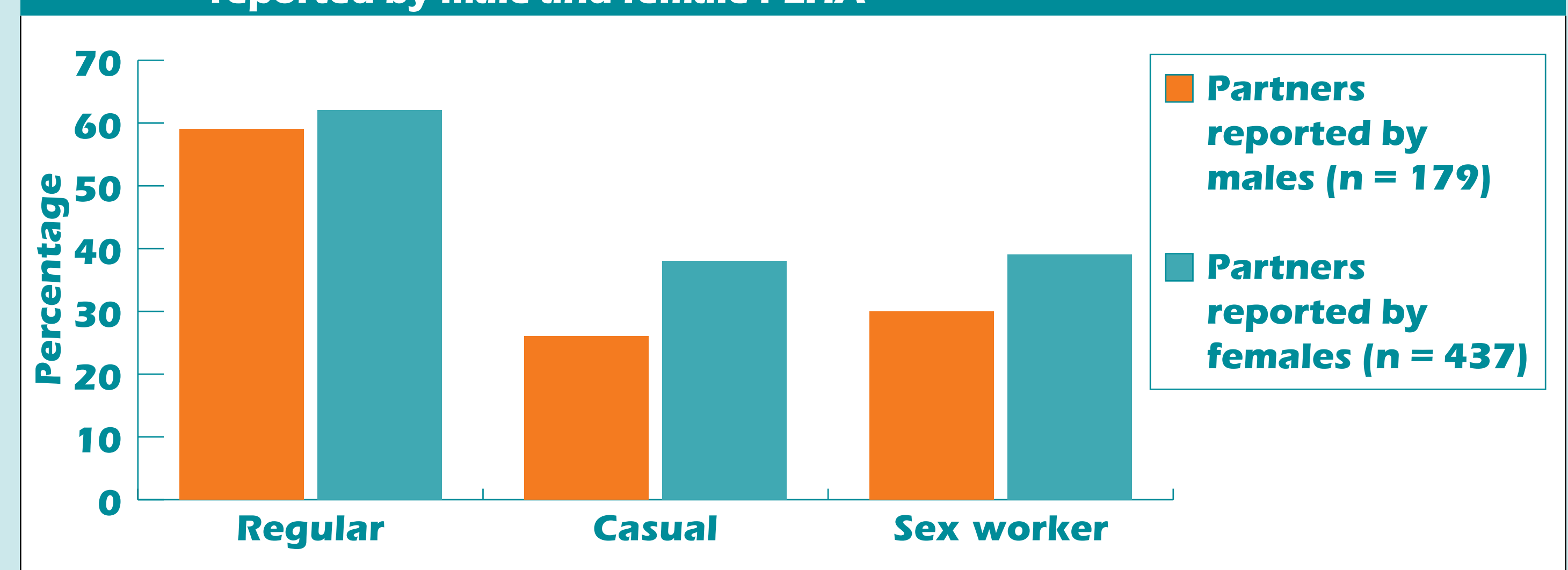
The HIV status of the majority of sex partners were not known by the PLHA.

- The 413 sexually active participants reported a total of 616 sexual partners. Respondents were asked if they knew the HIV status of each of those sexual partners.
- The HIV status of about 75% of the sexual partners were unknown by the respondents, and 10% were reported by the respondent to be HIV negative.
- PLHA respondents disclosed their HIV status to only 37% of sexual partners.

Unprotected sex was prevalent, especially with regular partners of unknown HIV status or HIV-negative regular partners.

- Unprotected sex over the past 6 months was reported in nearly half of the sexual partnerships (48%; 293/616).
- Inconsistent condom use was significantly more common among relationships with regular partners than with casual partner or sex workers in partnerships reported by both male and female respondents (Figure 1).
- More importantly, 62% of PLHA respondents reported unprotected sex with regular partners who were either HIV negative or of unknown HIV status.

Figure 1 Unprotected sex in the last 6 months with different types of partners reported by male and female PLHA



Factors associated with unprotected sex with sexual partners

In multivariate analysis (Table 2), non-disclosure of HIV status to partners (AOR 2.47), moderate levels of internalized stigma (AOR 3.00), believing condoms reduce sexual pleasure (AOR 2.99) or being ambivalent about it (AOR 9.19), not using any family planning methods (AOR 4.17) and using a non-condom family planning method (AOR 5.48) were independently associated with URS.

Table 2 Factors associated with unsafe, risky sex (URS) among HIV-positive sexually active participants not receiving ART

Variable	URS in the last 6 months		
	Prevalence of URS % (n)	Crude Odds (95% CI)	Adjusted Odds (95% CI)
Sex of respondent			
Male (n = 179)	36 (65)	1.0	1.0
Female (n = 437)	46 (202)	1.5 (0.88–2.59)	1.96 (1.07–3.57)
Disclosure to partner			
Yes (n = 228)	31 (71)	1.0	1.0
No (n = 388)	50 (196)	2.26 (1.52–3.35)	2.47 (1.53–3.99)
Perceived internalized stigma			
Minimal/Low (n = 98)	17 (17)	1.0	1.0
Moderate (n = 431)	47 (202)	4.20 (2.22–7.95)	3.00 (1.55–5.80)
High (n = 87)	55 (48)	5.86 (2.60–13.21)	2.04 (0.80–5.23)
Tired of using condoms			
Disagree (n = 319)	33 (106)	1.0	1.0
Agree (n = 253)	50 (126)	1.99 (1.26–3.14)	1.41 (0.84–2.37)
Ambivalent (n = 44)	80 (35)	7.81 (3.31–18.43)	4.88 (1.82–13.09)
Believe condoms reduce pleasure			
Disagree (n = 222)	27 (59)	1.0	1.0
Agree (n = 369)	51 (188)	2.87 (1.81–4.54)	2.99 (1.71–5.23)
Ambivalent (n = 25)	80 (20)	11.1 (4.03–30.28)	9.19 (2.70–31.19)
Family planning methods used			
Use condom (n = 124)	16 (20)	1.0	1.0
Use other methods (n = 117)	53 (62)	5.9 (2.87–11.96)	5.48 (2.56–11.73)
No family planning (n = 375)	49 (185)	5.06 (2.72–9.42)	4.17 (2.13–8.17)

Adjusted for intra-client clustering; Multivariate analysis is adjusted for education, time since diagnosis.

Conclusions

- HIV prevention programs need to target 'healthy positives' in the community to address positive prevention and emphasize:
 - Disclosure of HIV status;
 - Partner testing;
 - Condom use with all partners; and
 - Reduction in the number of partners.
- Beliefs and attitudes relating to condom use emerged as important factors influencing safe sex. Further research is required to explore what shapes these attitudes in a HIV-positive population and interventions to modify attitudes and behaviours.
- Stigma still remains an important influence in the lives of HIV-positive persons. Perceived or internalized stigma needs to be addressed as it may influence how they access information on prevention, care, and treatment services.
- Family planning services should be integrated into prevention programs. Further, family planning services need to address the special needs of HIV-positive persons, particularly in the context of HIV discordant couples.