

The Role of Partner Violence in Women's Ability to Distribute and Use HIV Self-Tests with Male Partners in Kenya

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Background

- Rates of testing among men and couples remain low in sub-Saharan Africa.
- Providing women who access health services with multiple self-tests for secondary distribution to their male partners is a novel strategy to facilitate partner and couples self-testing.
- Two recent studies in Kenya have shown that HIV-negative women are willing and able to distribute self-tests to their male partners (Masters et al. *PLoS Med* 2016; Thirumurthy et al. *Lancet HIV* 2016).
- Whether intimate partner violence (IPV) limits distribution of self-tests to male partners is a concern that needs to be addressed.

Objective

- To examine the association between history of IPV and the likelihood that women distribute and use HIV self-tests with their sexual partners

Methods

Study setting

- Kisumu county in western Kenya (Figure 1)
- Participants enrolled at antenatal and postpartum clinics (ANC/PPC)

Inclusion criteria

- HIV-uninfected
- Age 18-39 years
- Has a primary sexual partner

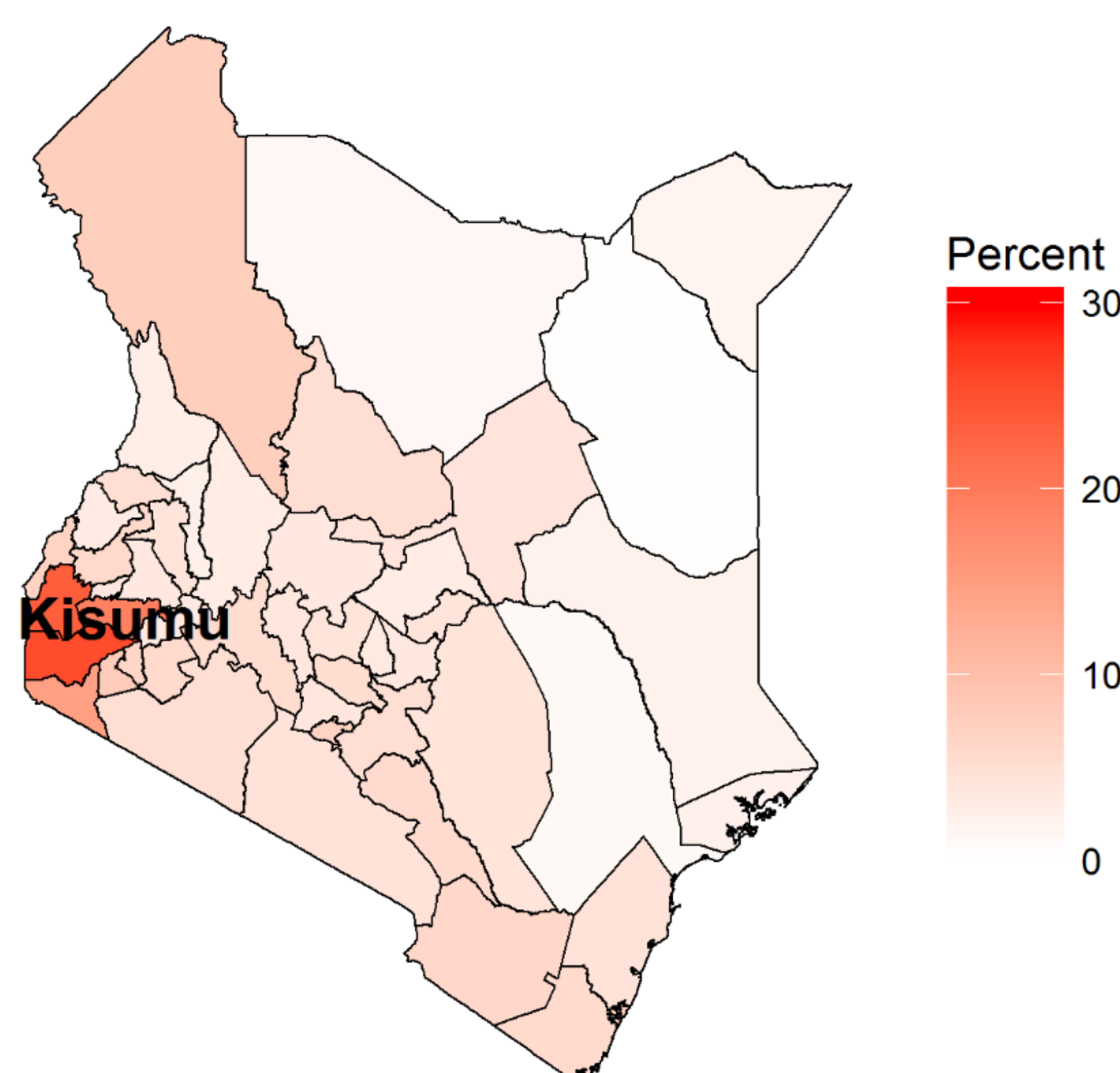
Exclusion criterion

- Thought IPV would result from offering a self-test to her primary partner

Intervention and procedures

- Participants given 3 OraQuick Rapid HIV Tests
- Participants educated on how to use self-tests and provided with written and pictorial instructions
- Participants encouraged to distribute self-tests to partners, others in their social networks at own discretion
- Follow-up interviews conducted at 1, 2, and 3 months

Figure 1: HIV prevalence by county in Kenya



Statistical analyses

- We analyzed secondary data from a cohort study in Kenya that provided women HIV self-tests for own use and distribution in their networks.
- Using multinomial logistic regression, we assessed whether self-test distribution to partners within 3 months was associated with the history of physical or sexual violence in the 12 months prior to enrollment.
- The likelihood of partner and of couples self-testing was compared to the likelihood that a partner did not test according to history of IPV.
- The likelihood of partner self-testing was also compared to the likelihood that couples self-testing occurred according to history of IPV, whether the partner responded with a neutral or negative reaction to the offer of a self test, and whether it was not easy to encourage the partner to test.
- Participants' demographic characteristics, perceived risk of HIV, and partner testing history were included as covariates.

Results

- A total of 176 women were enrolled (61 ANC, 117 PPC).
- 162 (92%) provided complete follow-up information.
- About half of participants were aged 18-24 years and most had attained at least some secondary education (Table 1).
- The majority of participants were married (91%) and reported that their primary partner tested for HIV in the 12 months prior to enrollment (70%).
- A history of IPV was reported by 21% of participants at enrollment.

Table 1. Characteristics of female participants

	N (%)
No. of participants who completed follow-up¹	162
Age (years)	
18-24	83 (51)
≥25	79 (49)
Highest level of education attained	
Primary	47 (29)
Some secondary	66 (41)
Secondary or higher	48 (30)
Married	148 (91)
Had any living children at the time of enrollment	126 (78)
Experienced IPV in past 12 mo.	34 (21)
Perceived risk of HIV	
No or low risk	105 (65)
Moderate or high risk	28 (17)
Unknown risk	28 (17)
Partner tested for HIV in past 12 mo.	113 (70)

Partner and couples self-testing were significantly less likely to occur if a woman reported a history of recent intimate partner violence.

Table 3. Unadjusted and adjusted¹ odds ratios (OR) and 95% confidence intervals (CI) for characteristics associated with outcomes of secondary distribution intervention.

Variable	Partner self-testing occurred		Couples self-testing occurred	
	Unadjusted OR (95% CI)	Adjusted OR (95% CI)	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
History of IPV				
Did not experience IPV in past 12 mo.	1.00	1.00	1.00	1.00
Experienced IPV in past 12 mo.	0.21** (0.06 - 0.70)	0.10*** (0.02 - 0.46)	0.32** (0.11 - 0.92)	0.13*** (0.03 - 0.54)
Perceived risk of HIV				
No or low risk	1.00	1.00	1.00	1.00
Moderate or high risk	0.17** (0.04 - 0.68)	0.25 (0.05 - 1.23)	0.35 (0.11 - 1.08)	0.46 (0.12 - 1.77)
Unknown risk	1.46 (0.28 - 7.71)	4.10 (0.47 - 35.58)	1.07 (0.21 - 5.50)	2.74 (0.34 - 22.28)
Partner tested for HIV in past 12 mo.				
No	1.00	1.00	1.00	1.00
Yes	1.59 (0.35 - 7.27)	1.42 (0.20 - 10.12)	2.20 (0.51 - 9.53)	2.51 (0.41 - 15.33)
Don't know	0.94 (0.17 - 5.25)	0.44 (0.06 - 3.49)	0.93 (0.18 - 4.90)	0.62 (0.09 - 4.16)
Observations	-	160	-	160

¹ The likelihood of partner and couples self-testing is compared to the likelihood that the partner did not self-test; ** p < 0.01, *** p < 0.001. Demographic characteristics included in adjusted analyses were the participant's age, marital status, highest level of education attained, and whether she had any living children at the time of enrollment.

History of IPV and likelihood of partner versus couples self-testing

- Among participants whose partner self-tested, history of IPV was not significantly associated with whether partner versus couples self-testing occurred.
- However, couples self-testing was less likely to occur if the partner responded with a neutral or negative reaction to the offer of a self-test (OR 0.37, 95% CI 0.15 - 0.91; aOR 0.32, 95% CI 0.12 - 0.87) or if it was not easy for the participant to encourage her partner to self-test (OR 0.31, 95% CI 0.11 - 0.83; aOR 0.26, 95% CI 0.09 - 0.76).

Variables

- Our primary outcome had three classifications indicating whether:
 - Partner self-testing did not occur
 - Partner self-testing occurred but couples self-testing did not
 - Couples self-testing occurred
- History of IPV was assessed at enrollment as an affirmative response to one or both of the following:
 - "In the past 12 months, has your partner pushed, grabbed, slapped, choked, hit or kicked you?"
 - "In the past 12 months, has your partner forced you to have sex when you did not want to?"

Self-test distribution & use with primary partners

- High rates of partner and couples self-testing were achieved in 3 months (Table 2).
- Couples self-testing occurred for 89 participants (55%) and 55 participants (34%) reported partner self-testing occurred.
- 18 participants (11%) reported that their partner did not self-test.

Table 2. Self-test distribution and use with primary partners

	N (%)
No. of participants who completed follow-up ¹	162
Partner did not self-test	18 (11)
Partner self-testing occurred but couples self-testing did not	55 (34)
Couples self-testing occurred	89 (55)

¹Excludes two participants who were missing data on distribution of self-tests to their primary partners.

Conclusions

- Results suggest that within the context of an intervention in which women received multiple oral fluid-based self-tests for distribution in their social networks, a history of IPV had a significant influence on the likelihood that women distributed and used self-tests with their male partners.
- Although secondary distribution of HIV self-tests offers important health benefits for women, men, and couples, it is unlikely these benefits can be fully realized in relationships where IPV occurs.
- Despite the high prevalence of IPV among participants, the results also reveal that the secondary distribution intervention effectively promoted male partner and couples self-testing.
- Further investigation of secondary distribution interventions and additional strategies to promote testing among men and couples is warranted.

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