

HIV Testing Attitudes and Behaviors at a Sports-based HIV Prevention Program

in Mukuru kwa Ruben, Nairobi, Kenya

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BACKGROUND

HIV/AIDS is a major health problem in Sub-Saharan Africa, and it is vital that people know their HIV status, that those testing positive be evaluated promptly for appropriate treatment, and that individuals needing treatment are successfully retained on treatment. Common barriers to HIV testing, access to care, and adherence to anti-retroviral therapy include: stigma, privacy issues, distance to the clinic, long wait time, lack of community involvement, and loss of employment and productivity. One innovation that may help break down barriers to testing is HIV self-testing (HST) kits, recently approved in both the US and Kenya. Furthermore, about 40% of HIV-positive individuals who qualify for HIV treatment are not taking antiretroviral therapy (ART) and innovative strategies may make it easier for these HIV-positive individuals to receive and continue on care. Community-supported models of care for HIV positive people in Sub-Saharan Africa, including social support groups of HIV+ individuals who can take turns visiting the clinic and obtaining ARV medications for the group, may help break down barriers to retention on care for HIV+ individuals.

Sports-based HIV prevention programs have shown overall strong evidence for positive effects on HIV-related knowledge, stigma, communication, self-efficacy, and risk behaviors. We collaborated with one such program, Vijana Amani Pamoja (VAP), that offer football tournaments in low-income areas of Nairobi with free HIV testing for attendees. These tournaments provide a unique opportunity to understand risk behaviors and perceptions of testing in a high-risk population. Thus, we conducted a cross-sectional pilot study among youth and adults aged 14 years and older who are offered free HIV testing and counseling while attending tournaments hosted by VAP.

METHODS

- Questionnaire
 - Developed a 23 question survey to assess:
 - Sociodemographics
 - HIV risk behaviors
 - HIV testing behaviors and attitudes
 - Knowledge of HIV self-testing (HST)
 - HIV status, and linkage and barriers to care
 - Collaborated with an expert translator to develop the English survey into Swahili and Sheng (slang version of Swahili spoken by youth in Nairobi)
 - Surveys were administered on electronic tablets through the REDCap platform (Research Electronic Data Capture), a double firewall-protected system for data collection and analysis.
- IRB approval
 - Obtained final approval from MUSC IRB on June 13th, 2016
 - Obtained final approval from KEMRI IRB (University of Kenya) on August 19th, 2016
- Football Tournament
 - September 3rd and 4th, 2016
 - Mukuru kwa Ruben, Nairobi
 - 32 boys and girls teams participated
 - 520 spectators/participants/coaches tested for HIV
 - 3,600 free condoms distributed
 - 10 males were referred for voluntary male medical circumcision (VMMC)

STATISTICAL ANALYSIS

- Data quality: 66 survey responses were deleted due to extremely poor data quality
- All analyses were run in SAS 9.4
- Frequency tables were computed to assess basic demographics of the study population as well as to assess significant preliminary associations
- Chi-squared and Cochran-Armitage tests were used to assess outcomes
- P-values of <0.05 were considered significant
- Unconditional multivariate logistic regression was used to attempt to identify the best predictive models for willingness to use HST and hand out HST kits to family and friends
 - All potential covariates were assessed for significance (e.g. gender, age, marital status, etc.), but only significant results are shown

STUDY POPULATION

- 428 responses
 - Mostly male (61.2%)
 - Majority are Catholic or Protestant
 - 44.4% Catholic, 16.6% Protestant, 12.1% Other, 9.1% Muslim, 8.6% None, 0.23% Traditional, 0.23% Buddhist
 - Mostly young, unmarried, with no children
 - Median age: 18 years
 - 77.1% not married
 - 77.1% with no children
 - 6.54% were HIV positive
 - 17.1% had an STI other than HIV

RESULTS

Variables	Heard of HST		p-value
	Yes (%)	No (%)	
Tested Today			0.0053
	Yes	160 (54)	136 (46)
	No	41 (38)	66 (62)

Variables	Willing to use HST		p-value
	Yes (%)	No (%)	
Tested Today			0.027
	Yes	232 (79)	60 (21)
	No	73 (69)	33 (31)
Premarital Sex against religious or cultural beliefs			0.048
	Yes	164 (82)	36 (18)
	No	134 (74)	48 (26)

Variables	Willing to pass on HST kits		p-value
	Yes (%)	No (%)	
Premarital Sex against religious or cultural beliefs			0.0002
	Yes	190 (93)	15 (7)
	No	147 (80)	37 (20)

Variables	Adjusted Odds Ratio (95% CI)	p-value
Premarital Sex against religious or cultural beliefs	4.368 (2.052-9.3)	<0.001
Comfortable talking about HIV testing to friends and family	3.747 (1.378-10.19)	0.0096

Variables	Adjusted Odds Ratio (95% CI)	p-value
Gender (female vs. male)	0.452 (0.273-0.748)	0.002
Heard of HIV self-testing	1.640 (0.991-2.716)	0.0545
Willing to pass on HST kits	2.148 (1.114-4.141)	0.0225

Barrier	N (%)
Excessive time commitment	12 (50)
Having to miss work	10 (41.7)
Fear of others discovering their HIV status	6 (25)
Not feeling ill	11 (45.8)

Age Categories	Heard of HST		p-value	Willing to use HST		p-value	Willing to pass on HST kits		p-value
	Yes (%)	No (%)		Yes (%)	No (%)		Yes (%)	No (%)	
14-15	39 (40)	58 (60)		59 (63)	35 (37)		82 (84)	16 (16)	
16-18	53 (51)	51 (49)	0.0035	79 (76)	25 (24)	0.0001	86 (84)	16 (16)	0.16
19-23	44 (46)	52 (54)		76 (82)	17 (18)		85 (89)	11 (11)	
24+	59 (65)	32 (35)		79 (86)	13 (14)		85 (89)	10 (11)	



Sponsors' banner placed in the confidential tent used for the administration of the questionnaires



VAP employees practicing delivering the questionnaires on the electronic tablets

CONCLUSIONS

- These preliminary data suggest that this population is highly motivated to test for HIV and willing to use HST on themselves and as a tool to motivate others to test.
- Survey participants were more likely to:
 - Know about HST and be willing to use HST if they tested for HIV at the current VAP tournament
 - Be willing to use HST and be willing to pass out HST kits if it was against their cultural or religious beliefs to engage in premarital sex
- As the age of participants increased, the proportion of those who knew about HST, were willing to use HST, and were willing to pass out HST kits all increased (the trend for passing out kits was not statistically significant)
- Participants were at higher odds of being willing to pass out HST kits if:
 - It was against their cultural or religious beliefs to engage in premarital sex
 - They were comfortable talking about HIV to their family and friends
- Participants were at higher odds of being willing to use HST if:
 - They were male
 - Had heard of HST
 - Were also willing to pass out HST kits
- There are a few perceived barriers to ART adherence that could be addressed in a potential future intervention
 - Most common: time commitment to obtain medication, not feeling ill, and missing work to obtain medication

FUTURE DIRECTIONS AND RESEARCH

- Obtaining funding to develop an intervention aimed to increase testing rates of acquaintances of the highly motivated population using HST
- Attempt to improve linkage to care and ART adherence for HIV positive individuals through lessening the time commitment necessary to obtain ART and educating HIV positive patients on the importance of ART even among physically healthy patients

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