

Provision of Flavored Condoms to Women in an HIV Prevention Trial in Southern Africa: Acceptability and Uptake

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1. Background

- Consistent male condom use to prevent heterosexual HIV acquisition is notoriously difficult to achieve.
- During a multisite HIV prevention trial of the diaphragm in Southern Africa (MIRA), we provided **flavored male condoms** as a strategy to encourage **condom use** and **visit retention**.

2. The MIRA Study

MIRA Trial Sites



UZ-UCSF
Harare, Zimbabwe

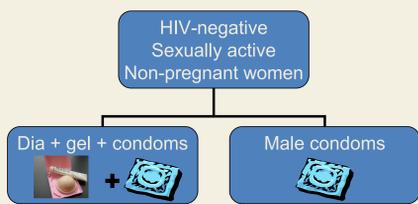
PHRU
Soweto, South Africa

MRC
Durban, South Africa

Study Aims

To examine the effectiveness of the diaphragm and lubricant gel for preventing HIV acquisition in women.

Study Design



All women received risk-reduction counseling, free male condoms, and diagnosis and treatment of curable STIs

Condom Provision

- Unlimited standard, government-issue free male condoms were given to all women for the trial duration.
- Flavored condoms were purchased (US 10¢/condom) and provided from approximately 1 year after trial start through end of study.
- 12 flavored condoms, per participant, per quarter were provided in a variety of flavors: **Chocolate, Vanilla, Mint, Banana, Strawberry, Peach, Apple, Orange, Grape.**

3. Methods

Study Sample

- Flavored condom use and attitudes were measured among:
 - Quantitative: 3,571 sexually active women (median 14 sex acts/month) who received a structured interview at exit.
 - Additional analyses of condom use before and after flavored condom use considered the full MIRA trial sample.
 - Qualitative: 215 women and 31 of their male partners in 34 exit focus groups and 10 in-depth interviews.

Analysis

- Quantitative:
 - Tabulation of self-reported flavored condom attitudes and use
 - Bivariate association of condom use since last visit (every time vs. not every time) before and after flavored condom provision was computed using GEE logistic regression to adjust for repeated measurements
- Qualitative:
 - Transcripts thematically coded and analyzed using Atlas.ti software

4. Results

Table 1. Sample Description

	MIRA Sample (n = 5,039)	Responded to Closing Questionnaire (n = 3,571)	Participated in Focus Groups (n = 206)	Women Whose Male Partner Participated in IDI (n = 41)
Site				
Harare		1,666 (47%)	80 (39%)	27 (66%)
Durban		1,081 (30%)	91 (44%)	7 (17%)
Johannesburg		824 (23%)	35 (17%)	7 (17%)
Age				
≤24 years	1,933 (38%)	1,388 (39%)	70 (34%)	14 (34%)
25–34 years	1,972 (39%)	1,344 (38%)	90 (43%)	21 (51%)
≥35 years	1,133 (23%)	838 (23%)	45 (22%)	6 (15%)
High school educated	2,214 (44%)	1,514 (42%)	85 (41%)	17 (42%)
Married	2,972 (55%)	2,034 (57%)	105 (51%)	30 (70%)

Contact Information

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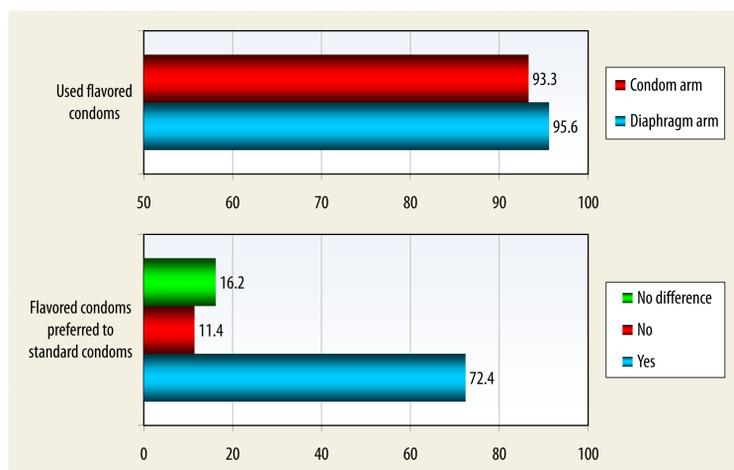
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4. Results (continued)

Figure 1. Self-report of Flavored Condom Acceptability and Use at Exit (n = 3,571)

A. Flavored condoms were used by most women and preferred to standard condoms



B. Many women reported that flavored condoms increased their use of condoms

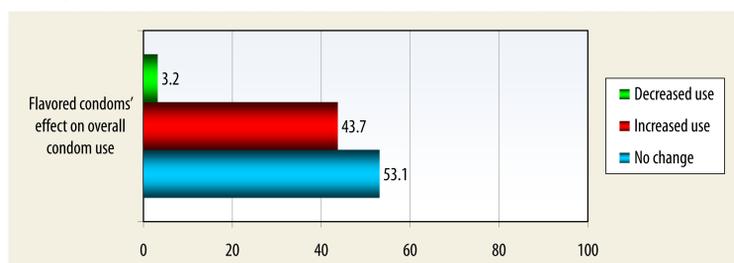


Table 2. Bivariate Association between Condom Use before and after Provision of Flavored Condoms

Condom Used Every Time Since Last Visit	Full MIRA Sample (n = 4,968; 26,756 person-visits)		Participants Responding to Closing Questionnaire (CQ) (n = 3,571; 17,830 person-visits)		Participants Reporting Flavored Condoms Increased Use in CQ (n = 1,472; 8,126 person-visits)	
	Estimate (95% CI)	P	Estimate (95% CI)	P	Estimate (95% CI)	P
Overall	1.05 (0.98–1.13)	0.14	0.97 (0.87–1.08)	0.61	0.95 (0.79–1.15)	0.61
Diaphragm arm	1.04 (0.95–1.13)	0.39	0.95 (0.84–1.07)	0.39	0.93 (0.75–1.15)	0.49
Condom arm	1.06 (0.94–1.20)	0.34	1.03 (0.83–1.28)	0.79	1.01 (0.67–1.54)	0.94

Qualitative Results

- Qualitative data from men and women suggested a notable preference for flavored condoms for a variety of characteristics, including improved smell:
 - D > The flavor emitted is very nice. The blankets smell nice.
 - B > Even a visitor will not smell anything if he comes after you have just finished. He will just smell the sweet smell. —(Men D & B, Harare, 13/Jan/07)
- Thickness, sensitivity, and oil content:
 - A > These ones don't have lots of oil and when they touch your skin, they make it untouchable, you feel as if it's flesh to flesh and yet it is not flesh to flesh. —(Woman A, Condom arm, Johannesburg, 29/Aug/06)
- For many, flavored condoms increased the "fun" and pleasure of sex and were perceived as "stronger" than standard condoms.
 - I > He chooses the flavor that he wants us to use when we are about to have sex whether bananas or chocolate.
 - C > I found that they are stronger than the other ones.... It increased (sexual pleasure) because of the flavor that you smell. It made me happy and enjoy what was happening. —(Women I & C, Condom arm, Zimbabwe, 11/Sep/06)
- A minority felt flavored condoms were no different than standard condoms or they were concerned that the condoms were less comfortable or strong.
 - F > To me, there is (a difference). These ones that smell nice I heard him complaining about that they seemed to be tight, they seemed to be a small size. I do not know whether the elastic was small here on top or what. We used them once and then we left them. —(Woman F, Condom arm, Durban 12/Apr/06)

5. Conclusions

- Men and women enthusiastically received flavored condoms and preferred them to standard condoms.
- Although some women reported that flavored condoms increased condom use, our quantitative analyses did not substantiate this, potentially because of limited supplies.
- Provision of flavored or novelty condoms should be further explored as a strategy to increase condom use in Africa, while assessing their cost-effectiveness and impact on use of standard condoms.
- Being "sex-positive" and making condom use "fun" are health promotion strategies that should be explored further in this cultural context.

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