



The role of condom access on condom use in a resource-limited setting – the case of Kilifi district, Kenya

J. K. Papo¹, E. Bauni², E. Sanders², H. Jaffe¹

¹University of Oxford, Dept. Public Health, Oxford, United Kingdom ²Kenya Medical Research Institute, P.O. Box 230, Kilifi, Kenya

Correspondence to:
Jacqueline Papo
Department of Public Health
Rosemary Rue Building,
Old Road Campus, Roosevelt Drive,
Headington, Oxford, OX3 7LF, UK
jacqueline.papo@gmail.com

INTRODUCTION

In the context of **Kilifi district, coastal Kenya**, this study investigates the role of geographic, financial and social factors in determining condom use among the sexually active general population. Kilifi is one of the poorest districts in Kenya; it is predominantly rural, and adult HIV prevalence is 5% (Kilifi District Hospital, ANC 2005).

Condoms are available through health facilities and commercial outlets. Health facilities mainly provide free condoms from the Ministry of Health, and commercial outlets mainly provide the condoms "Trust," socially marketed by Population Services International, and sold at 10 Kenyan Shillings (0.15 USD) for a pack of three condoms.

It was hypothesised that individuals with higher levels of geographic, financial and social access would have higher levels of condom uptake and consistency in use.

METHODS

Within the Demographic Surveillance System (DSS) of the Kenya Medical Research Institute-Wellcome Trust programme in Kilifi, **an urban site (Kilifi Town)** with high access to condoms, and a **rural site (Sokoke)** with low access to condoms, were selected. All potential condom outlets (278) were **mapped and surveyed**. These included health facilities, shops/kiosks, chemists and entertainment spots (bars/discos/guesthouses). **Questionnaires** (n=630; 322 Kilifi Town / 308 Sokoke) were administered face-to-face at the household-level among a random sample of the population, 15-49 years old, male & female. The DSS was used as a sampling frame from which the computer-generated random sample of individuals was obtained. Geographical data were processed using ArcMap 9.2. STATA 9 was used for statistical analysis (chi-squared test, t-test and logistic regression).

RESULTS

Level of condom use: Among the sexually active respondents (n=459, 73% of total sample), 42% had ever used a condom, 23% had used a condom over the past 12 months, and 27% had used a condom "most of the time" during high-risk sex (defined as sex with a non-marital/non-cohabiting partner). The levels of condom use were significantly higher among the urban respondents than the rural respondents. The levels of high-risk sex were similar across both sites (table 1).

Prevalence of barriers: 99% of individuals in the rural site had *geographic/financial barriers*, versus 15% in the urban site. 85% of respondents had *social barriers*, with no significant difference (p<0.05) between the urban and the rural site. In the urban site, the proportion of respondents with social barriers was higher than the proportion with geographic/financial barriers. In the rural site, the proportion of respondents with geographic/financial barriers was higher than the proportion with social barriers. Overall, 93% of respondents had either type of barrier, 100% in the rural site and 85% in the urban site (table 2).

Effect of access on condom use: Controlling for factors associated with condom use (gender, age, education and high-risk sex), individuals with no geographic/financial barriers, no social barriers and neither type of barrier were more likely to have reported condom use "ever," "over the past 12 months," and "most of the time." The effect was greater for "no social barriers" than for "no geographic/financial barriers." **The increase in likelihood of condom use reached 13-fold (for condom use over the past 12 months) among individuals with neither type of barrier, i.e. with optimal geographic/financial and social access to condoms** (table 3).

Table 1: Level of condom use, urban versus rural site

% (among the sexually active)	Kilifi Town	Sokoke	p	Overall
Ever used condom	48	34	0.002	42
Used condom over past 12 months	28	17	0.015	23
Used condoms "most of the time" during high-risk sex	33	21	0.022	27

Note: High-risk sex was 64% ever, and 28% over the past 12 months, with no significant difference (p<0.05) across the urban and the rural site.

Table 2: Prevalence of geographic/financial & social barriers, urban versus rural site

% (among the sexually active)	Kilifi Town	Sokoke	p	Overall
With geographic/financial barriers ¹	15	99	0.000	52
With social barriers ²	87	82	0.124	85
With either type of barrier	85	100	0.000	93

¹ Defined as respondents who are located more than 1 km from the nearest health facility with condoms, or who cannot afford condoms at the nearest shop less than 1 km away.

² Defined as respondents reporting one or more of the following: embarrassment at obtaining condoms, difficulty asking their partner to use condoms, negative attitudes towards condoms, no previous exposure to condoms (never shown how to use or never offered a condom).

Table 3: Effect of geographic/financial and social factors on condom use (among the sexually active)

Adjusted Odds Ratio (barriers versus no barriers) (95% CI) for:	No geographic/financial barriers	No social barriers	Neither type of barrier
Ever use	2.2 (1.4-3.6)	5.9 (2.9-11.9)	5.9 (2.1-16.7)
Use over past 12 months	2.5 (1.3-5.0)	8.6 (4.0-18.5)	13.0 (4.1-41.7)
Use "most of the time" during high-risk sex	1.9 (1.1-3.3)	1.5 (0.8-3.0)	2.9 (1.2-7.5)

CONCLUSIONS

In both the urban and rural sites, condom use was low, and full geographic/financial and social access to condoms were lacking. Controlling for socio-demographic factors and high-risk sex, individuals with higher levels of condom access had higher levels of uptake and consistency in use. These results point to the key role of efforts aimed at improving geographic/financial and social access to condoms in resource-limited settings. With less than a third of respondents using condoms "most of the time" during high-risk sex, efforts must also include messages emphasising consistency.

