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## The practice and prevalence of dry sex among men and women in South Africa: a risk factor for sexually transmitted infections?

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**Objectives:** To establish the prevalence of “dry sex” practice in a South African periurban population. To investigate the reasons for and factors influencing the practice of dry sex and to evaluate dry sex practice as a risk factor for sexually transmitted disease (STD).

**Design:** Cross sectional sample survey.

**Methods:** A random community sample of men and women aged between 16 and 35 in Gauteng Province, South Africa, were interviewed regarding the practice of dry sex using a structured interviewer administered questionnaire.

**Results:** Dry sex practices were reported by 60% of men and 46% of women. Among younger individuals dry sex practice is far more common among the less educated, but there was no significant difference between education groups in the older respondents. A higher proportion of men practising dry sex than not practising dry sex reported having a past history of STD infection (56% versus 41%) although this difference was only marginally significant ( $p=0.05$ ). There was no difference in reported history of STD between women who practised dry sex and those who did not.

**Conclusions:** This study shows that dry sex practice is common in this community. The younger less educated group were the most likely to practise dry sex. Dry sex practice was associated with an increased prevalence of self reported STDs in men but not in women.

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Keywords: Africa; dry sex; sexual behaviour; sexually transmitted infections

## Introduction

The practice of “dry sex” refers to the drying and tightening (and sometimes warming) of the vagina for sexual intercourse. Reports of this practice come mainly from African countries.<sup>1–3</sup> The methods for this practice include vaginal douching,<sup>1–4</sup> insertion of a substance into the vagina,<sup>1–4</sup> drying with cloths,<sup>3–4</sup> and drinking preparations believed to cause drying effects on the vagina.<sup>3</sup> Previous studies have shown that substances inserted into the vagina include powders and stones,<sup>1–2</sup> leaves,<sup>1–5</sup> and herbal preparations.<sup>3–4</sup> Douching practices include water<sup>1–2</sup> and antiseptics.<sup>4</sup> The main reason being given for adopting the practice of dry sex is to increase sexual pleasure.<sup>1–4</sup>

Some of the methods used can cause a number of reactions including an inflammatory response and epithelial damage.<sup>1–5</sup> Genital lesions as a result of sexually transmitted diseases (STDs) have been shown to increase the risk of HIV transmission.<sup>6</sup> This would suggest that dry sex practice could be a potential risk factor in the transmission of STDs or HIV. A number of studies have attempted to investigate whether there is an association between dry sex practice and HIV transmission,<sup>3–8</sup> but the evidence is inconclusive.

South Africa is experiencing one of the fastest growing HIV epidemics in the world with antenatal rates of infection having risen from 26.9% in 1997 to 32.7% in 1998 in the worst affected province of KwaZulu Natal.<sup>9</sup> Wide variations in the prevalence of dry sex

practice have been reported from different countries,<sup>4–5</sup> but it is not known how widespread the practice is in South Africa. This study was undertaken to assess the prevalence and practice of dry sex in Gauteng Province and to look at factors influencing dry sex practice.

## Methods

## STUDY SITE AND POPULATION

The study was conducted in Orange Farm, a large informal settlement in Gauteng Province located about 50 kilometres south of Johannesburg.

## STUDY PROCEDURE

In total, 513 men and women in the age range 16–35 years were interviewed. Households were randomly sampled from household stand maps of the area and one randomly chosen member of each household was interviewed using a structured interviewer administered questionnaire conducted in the respondent's home language. The questionnaire topics included demographic information, fertility history, contraceptive history, condom use, and sexual practices. Fieldwork took place between June 1995 and April 1996.

## STATISTICAL ANALYSIS

Questionnaires were coded and data were entered and analysed using EPI-INFO 6.01 (Centre for Disease Control (CDC), Atlanta). The associations of dry sex practice with age, education, and self reported history of STD

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Table 1 Main reason given for the practice of dry sex

Reasons for practice	% Men (n=204)	% Women (n=309)
Enjoyment/feel well/pleasure	65	31
Shows woman is not promiscuous	18	15
Partner satisfaction	0	33
Don't know/did not want to explain	12	21
Other	4	1

was determined by means of ordinary  $\chi^2$  and Mantel-Haensel stratified analysis where appropriate. Respondents were stratified by age into two age groups—16–25 and 26–35 years, and by educational status (standard 5 or less, and standard 6 to 10).

## Results

### STUDY POPULATION

Of the 513 respondents 309 were women and 204 were men. The response rate was very high (98%). Almost all the respondents (90%) lived in informal housing. The two main languages spoken were Zulu (44%) and Sotho (37%). Almost a quarter of women (23%) and 47% of men were in some form of employment when interviewed. Almost three quarters of households had an income of less than R1000 a month (\$170.00).

### PREFERENCE FOR PRACTICE OF DRY SEX

The study found that dry sex was a common practice in Orange Farm with 60% of men and 46% of women stating a preference of dry sex over lubricated sex. The practice of dry sex varied by educational status and age groups. In the 16–25 year age group 87% of respondents whose education did not exceed standard 5, reported practising dry sex, while only 50% of respondents who were educated beyond standard 5, reported practising dry sex (RR 1.74, 95% CI 1.43–2.13). In the age group 26–35 years, the effect of educational status on the self reported practice of dry sex is less pronounced (61% v 51%, RR 1.20 95% CI 0.96–1.50).

A higher proportion of men practising dry sex reported having a history of STD infection compared with those not practising dry sex (56% v 41%,  $p=0.05$ ). There was no difference between women who practised dry sex and those who did not and self reported history of STDs.

Main reasons given for the practice are shown in table 1. Both men and women cited enjoyment as one of the major reasons for the practice. Nearly all the women used tissues, toilet paper, towels, or cloths (86%). Only 2% of women used any herbal preparations or leaves for drying purposes. The remainder used disinfectants, soap, and vaginal creams.

## Discussion

The prevalence of women practising dry sex in this study (46%) is similar to that reported from a study in Zaire.<sup>5</sup> The number of men who preferred dry sex was higher. Few studies have included men in their investigations and there is no information on numbers of men claiming or wanting to practise dry sex.

The analysis shows that there is an interaction of age group and educational status on the prevalence of the practice of dry sex. This shows a sharp difference between high school educated and primary school educated younger people as far as their preference for dry sex is concerned. The prevalence of this practice was highest in the poorly educated younger group (87%). The practice is more common in the younger age group than in their older counterparts among the less well educated, but there is no difference between young and old among the high school educated group. Although no other studies on dry sex have reported a link with education, the practice of vaginal douching for reasons other than dry sex has been inversely associated with education.<sup>10</sup>

The association between dry sex practice and STD/HIV infection has been investigated mainly in women<sup>3–8</sup> but there is no information on this association in men. This study shows that there is a weak association between self reported STDs and dry sex practice in men but not in women. In total, only 16% of the women reported ever having had an STD compared with 49% of men. This may be due to lack of awareness of women having asymptomatic infections. A similar study found that in women the reported STD rate of 11% increased to 46% on physical examination.<sup>8</sup> The issue of underreporting and asymptomatic STD infection in women indicates that this issue is difficult to resolve without clinical examination and laboratory confirmation.

A limitation of this study is the narrow spectrum of socioeconomic status among the participants. Being an informal settlement almost all households fell into a low income bracket. It is therefore not possible to make direct extrapolation from this study to the population of the province of Gauteng in general. Nevertheless, the findings indicate that the preference for dry sex is widespread in this segment of the population, which may expose them to an additional risk of HIV infection.

Dry sex practices may be in direct contradiction to HIV prevention messages, which may include the use of lubricated male or female condoms, lubricants, and spermicidal/microbical creams or gels. Knowledge of local sexual practices is essential for the development of appropriate safer sex messages in developing countries. In conclusion, this study has found that in this community dry sex is practised widely, self reported STD rates are high, multiple sexual partnerships are common, and condom use is low. It is of crucial importance that this information is used as a basis for designing strategies to address future interventions around HIV prevention.

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### MSSVD Clinical Development Fund

#### Call for submissions

The MSSVD invites submissions from members to support activities that advance the understanding and practice of genitourinary medicine which might not otherwise achieve funding. The maximum amount available is £10 000. There is no lower limit. Applicants are encouraged to obtain matching funding from other sources, but this is not a precondition. Consideration will be given to supporting projects of the following type: Research; Clinical effectiveness; Visits to other centres; Sabbaticals. Priority will be given to members working outside major academic units and teaching centres.

The project must be supervised by a member of the MSSVD Council and progress reports made to the council every 6 months until completion.

*Submissions to:* Jessica Ribbing, MSSVD Secretariat, Royal Society of Medicine, 1 Wimpole Street, London W1M 8AE.

*Further information:* Dr Keith Radcliffe, Honorary Assistant Secretary, MSSVD (tel: 0121 237 5719; fax: 0121 237 5729; email: k.w.radcliffe@bham.ac.uk).

The deadline for receipt of submissions is Friday 20 August 1999. Applicants will be informed of the outcome in early November.