

Factors associated with voluntary medical male circumcision in South Africa: Evidence from the 2017 South African National HIV Prevalence, Incidence, and Behaviour Survey

P2 – J10

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This study found the prevalence of voluntary medical male circumcision (VMMC) to be 53.3%. The likelihood of undergoing VMMC was high among individuals who earn R20 000 or more ($P < 0.001$), use a condom at last sex ($p < 0.001$), and age at first marriage between 30 and 35 years ($p < 0.001$). Likewise, increased odds were observed among males who had 2 to 5 sexual partners ($p = 0.013$), and more than 5 sexual partners ($p = 0.017$) in a lifetime. Men who had alcoholic drinks 3 or 4 times daily ($p < 0.001$), 5 or 6 times daily ($p < 0.001$), 7 - 9 times daily ($p < 0.001$), 14 or more times daily ($p < 0.001$) had higher odds of practicing VMMC compared to those who consume such drinks 1 or 2 times daily.

BACKGROUND

- Although South Africa is the epicenter of the HIV/AIDS pandemic, it has still not reached the targets for HIV combination prevention intervention programs, including voluntary medical male circumcision (VMMC) [1].
- Voluntary medical male circumcision is recognized as a crucial component of comprehensive HIV prevention strategies in countries with a high HIV prevalence, such as South Africa [2].
- Despite substantial efforts to promote VMMC as an effective tool for reducing HIV transmission, its uptake remains significantly low across different parts of South Africa.
- Therefore, this study aimed to determine the prevalence and factors associated with VMMC acceptance in South Africa.

METHODS

- This was a retrospective analytical cross-sectional study that utilised secondary data from the 2017 South African National HIV Prevalence, Incidence, and Behaviour Survey (SABSSM).
- The SABSSM survey was conducted by the Human Sciences Research Council (HSRC) in nine provinces of South Africa from January to December.
- Descriptive and multivariable logistic regression analyses were conducted using the STATA software version 18.
- A sample of 11085 male participants aged 15 years and older who reported their circumcision status was analysed.
- Voluntary medical male circumcision was the outcome variable.
- Exposure variables included socio-demographic factors, knowledge and attitudes towards HIV/AIDS, sexual history, sexual partner(s), perceptions of HIV risk, use of alcohol and other drugs, health-related questions, mental health, and household relationships.

RESULTS

Table 1: Demographic profile of respondents

Demographic factors	n (%)
Sex	
Male	11805 (100.0%)
15-24	2345 (19.9%)
15-34	3238 (27.4%)
35-44	2205 (18.7%)
45-54	1653 (14%)
55+	2364 (20%)
Marital Status	
Married	3635 (30.8%)
Never Married	7450 (63.1%)
Divorced/separated	351 (3.0%)
Widower / Widow	368 (3.1%)
Race	
African	7780 (70.6%)
Coloured	1356 (12.3%)
Indian	848 (7.7%)
White	1029 (9.3%)
Employment status	
Unemployed	5452 (46.2%)
Sick/disabled and unable to work	233 (2.0%)
Student/pupil/learner	888 (7.5%)
Employed / Self Employed	5092 (43.2%)
Other	131 (1.1%)
Disability Status	
Yes	533 (4.5%)
No	11256 (95.4%)
Do not know	11 (0.1%)
Yes	10707 (90.7%)
Ever attended school	
No	1094 (9.3%)
Urban	6720 (56.9%)
Geographical location	
Rural informal (tribal areas)	3479 (29.5%)
Rural (farms)	1606 (13.6%)
Western Cape	844 (7.1%)
Eastern Cape	920 (7.8%)
Northern Cape	761 (6.4%)
Free State	587 (5.0%)
Province	
KwaZulu-Natal	3541 (30.0%)
North-West	797 (6.8%)
Gauteng	2004 (17.0%)
Mpumalanga	1615 (13.7%)
Limpopo	736 (6.2%)

RESULTS CONTINUED

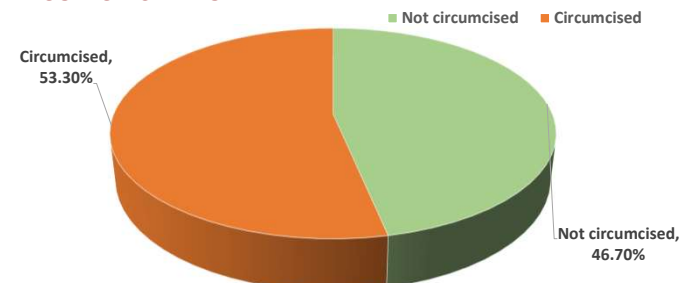


Figure 1: Prevalence of voluntary medical male circumcision in South Africa

Table 2: Logistic Regression Model showing factors predicting VMMC in South Africa

Variables	cOR (95% CI)	p-value	aOR (95% CI)	p-value
Gross monthly income				
< R 5000	Reference			
R 5000 – R 9 999	1.27(0.12-0.45)	<0.001*	1.06(0.87-1.29)	0.546
R 10 000 – R 14 999	1.28(1.04-1.57)	0.021*	0.83(0.62-1.11)	0.214
R 15 000 – R 19 999	1.44(1.12-1.85)	0.004*	0.95(0.68-1.33)	0.767
R 20 000 or more	1.05(0.88-1.25)	0.595	0.58(0.44-0.77)	<0.001*
Number of sexual partners within a lifetime				
1 person	Reference			
2-5	1.15(1.08-1.22)	<0.001*	2.59(1.22-5.51)	0.013*
> 5	1.60(1.49-1.71)	<0.001*	2.65(1.19-5.92)	0.017*
Condom at last sex? Most recent person				
No	Reference			
Yes	1.42(1.26-1.59)	<0.001*	1.67(1.50-1.86)	<0.001*
Age at first sexual intercourse				
<18 years	Reference			
18 - 23 years	0.89(0.79-1.01)	0.068	0.90(0.79-1.01)	0.084
24 - 29 years	0.98(0.89-1.07)	0.610	0.97(0.88-1.07)	0.535
30 - 35 years	1.33(1.17-1.51)	<0.001*	1.32(1.15-1.50)	<0.001*
>35 years	1.14(0.96-1.35)	0.146	1.12(0.93-1.33)	0.225
Number of alcoholic drinks consumed daily				
1 or 2	Reference			
3 or 4	1.14(1.02-1.28)	0.021*	1.27(1.12-1.44)	<0.001*
5 or 6	1.25(1.12-1.40)	<0.001*	1.42(1.24-1.63)	<0.001*
7 to 9	1.34(1.15-1.57)	<0.001*	1.59(1.33-1.90)	<0.001*
14 or more	1.37(1.15-1.64)	0.001*	1.61(1.33-1.97)	<0.001*

Note: * = $p < 0.05$; cOR, Crude Odds Ratio; aOR, Adjusted Odds Ratio; CI, Confidence Interval

CONCLUSION

- The study reveals that, on average, more than half of the South African men aged 15 years and above have undergone VMMC.
- The findings showed a significant association between VMMC and consistent condom use, age at first marriage, higher income, having multiple sexual partners, and alcohol consumption.
- However, future primary studies are recommended to explore more factors associated with low VMMC uptake across the country.
- Targeted approaches are needed to increase VMMC educational awareness campaigns.

FUNDING

The work reported herein was made possible through funding by the South African Medical Research Council (SAMRC) through its Division of Research Capacity Development under the Mid-Career Scientist Program using funding received from the South African National Treasury (Project Code number: 57035 [SAMRC File ref no: HDID8528/KR/202]). This work was conducted under the guidance of SAMRC/University of Johannesburg (UJ) Pan African Centre for Epidemics Research (PACER) Extramural Unit. The content herein is the authors' sole responsibility and does not necessarily represent the official views of SAMRC or UJ.

ACKNOWLEDGMENTS

I would like to thank the SAMRC/UJ PACER Extramural Unit for sponsoring the attendance of the WCE conference.

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