

**The prevalence and nature of
circumcision among adult men and
its relationship to HIV infection in
South Africa: Results from a national
survey in 2002**

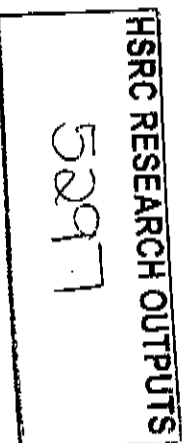
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Background

- **The 2002 Nelson Mandela/HSRC Study of HIV/AIDS was the first nationally representative household survey of its kind ever held in South Africa.**
- **The study provided the country with the following:**
 - **A new benchmark for HIV surveillance in the country for reporting estimates of HIV prevalence for the entire country as well as for every segment of the population.**
 - **Useful information on the behavioural risks driving the epidemic as well as responses to it by the general population.**
 - **Useful information on the role played by mass media-based interventions on reducing infections and mitigating the impact of the epidemic.**

Background (contd)

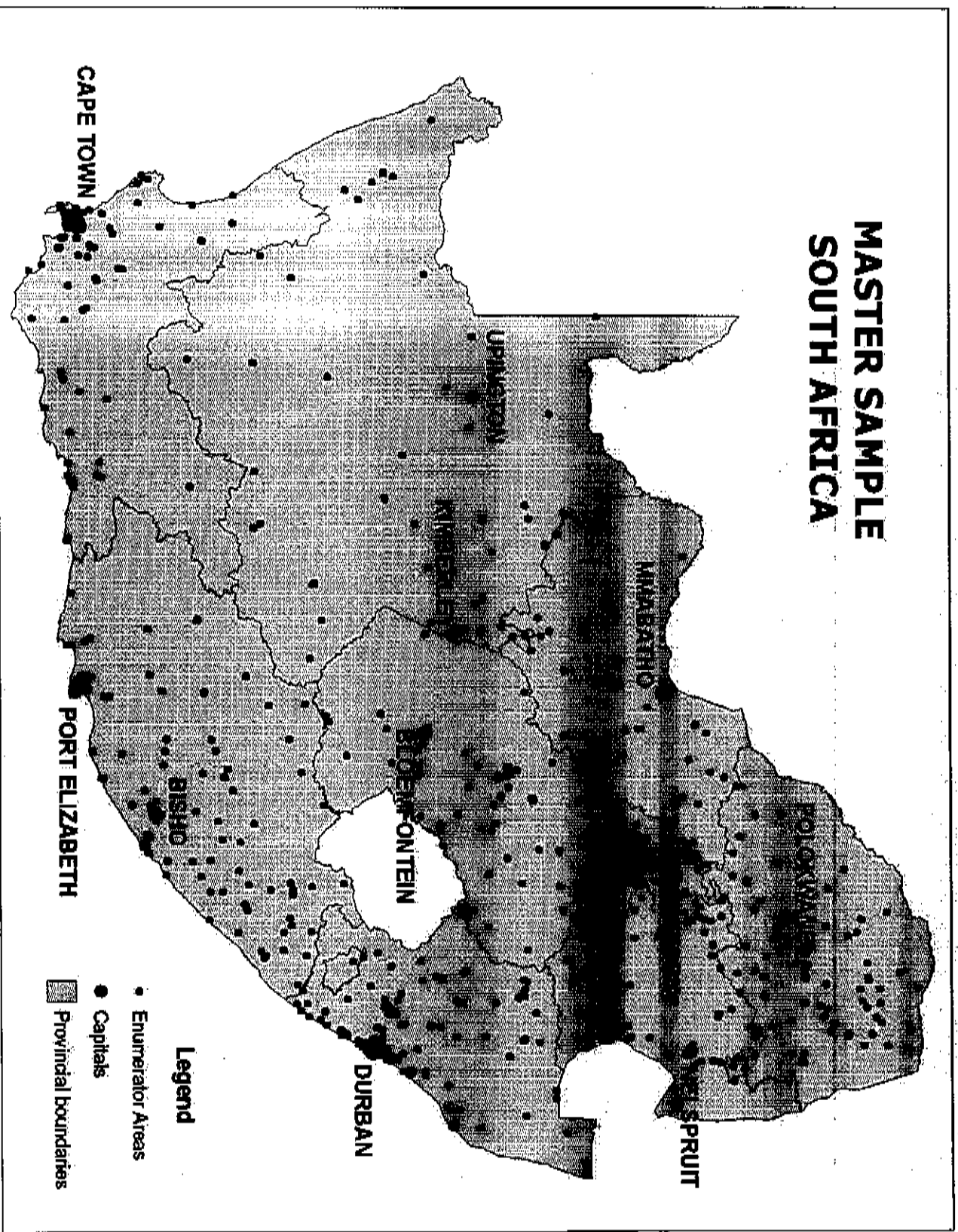
- **Some information on specific socio-cultural practices also believed to drive the HIV/AIDS epidemic in South Africa such as:**
 - **polygamy,**
 - **dry sex,**
 - **anal sex,**
 - **rites of death of spouses for widows, and**
 - **consultation with traditional and alternative healers**
 - **rites of passage to adulthood such as initiation and/or circumcision***
 - **marital practices such as payment of lobola or dowry***

*** not covered in detail in the 2002 report.**

Background (contd)

- **Very little is currently known about male circumcision in South Africa in terms of**
 - **its national prevalence,**
 - **its determinants, and,**
 - **its relationship to HIV infection**
- **The present study sought to fill this gap in our knowledge.**
- **This presentation focuses on the secondary analysis we have recently done on survey data collected from adult males aged 15 years and older during the 2002 survey.**

MASTER SAMPLE SOUTH AFRICA



Results

Description of the sample

- A total of 3 025 men aged 15 years and older participated in the study.
- The majority of men were African (58.6%), aged less than 25 years (58.7%), and lived in formal urban areas (59.5%).
- Over 60% of the men were Christian, only 3 Jewish (0.1%) and 125 Moslem (4.1%).
- The most common home language was Afrikaans which was spoken by 23.2% of the sample, followed by English spoken by 19.3%.
- Slightly over one third of the men (35.3%; n = 1 067) were circumcised.

Male circumcision by age, South Africa 2002

Age	N	% circumcised	OR	95CI	p
15-24	1776	32.80%	ref		
25-49	654	35.90%	1.1	1.0 - 1.4	0.15
50+	595	41.80%	1.5	1.2 - 1.8	<0.001

Male circumcision by race, South Africa 2002

Racial group	N	% circumcised	OR	95CI	p
Africans	1771	42.20%	ref		
Whites	307	30.30%	0.6	0.5 - 0.8	<0.001
Indians	385	25.20%	0.4	0.3 - 0.5	<0.001
Coloured	562	23.10%	0.5	0.4 - 0.6	<0.001

Male circumcision by province, South Africa 2002

Province	N	% circumcised	OR	95CI	p
KZN	608	15.10%	ref		
NC	206	13.10%	0.8	0.5 – 1.3	0.5
MP	158	29.70%	2.4	1.6 – 3.6	<0.001
NW	263	31.90%	2.6	1.9 – 3.7	<0.001
WC	395	32.70%	2.7	2.0 – 3.7	<0.001
FS	191	37.70%	3.4	2.4 – 4.9	<0.001
GT	538	39.20%	3.6	2.7 – 4.8	<0.001
EC	431	56.10%	7.2	5.4 – 9.6	<0.001
LP	235	69.40%	12.7	8.9 – 18.1	<0.001

Male circumcision by geotype, South Africa 2002

Geotype	N	% circumcised	OR	95CI	p
Rural	799	42.10%	ref		
Urban formal	1801	31.30%	0.6	0.5 - 0.7	<0.001
Urban informal	425	39.50%	0.9	0.7 - 1.1	0.4

Male circumcision and home language, South Africa 2002

Home Language	N	% circumcised	OR	95CI	p
IsiZulu	413	14.50%	ref		
siSwati	63	20.60%	1.5	0.8 – 3.0	0.2
Afrikaans	702	21.70%	1.6	1.2 – 2.3	0.004
Setswana	231	22.50%	1.7	1.1 – 2.6	0.01
English	585	31.30%	2.7	1.9 – 3.7	<0.001
Sosotho sa borwa ¹	187	37.40%	3.5	2.4 – 5.3	<0.001
Xitsonga	84	53.60%	6.8	4.1 – 11.3	<0.001
IsiXhosa ¹	457	64.30%	10.6	7.6 – 14.8	<0.001
IsiNdebele ¹	28	67.90%	12.4	5.4 – 28.7	<0.001
SePedi ¹	198	71.20%	14.6	9.6 – 22.0	<0.001
Tshivenda ¹	21	90.50%	55.9	246.1	<0.001
Other	56	33.90%	3	1.6 – 5.6	<0.001

Male circumcision and religion, South Africa 2002

Religion	N	% circumcised	OR	95CI	p
Christian	1951	33.60%	ref		
Islam/Jew	129	79.10%	7.4	4.8 – 11.5	<0.001
Other	432	24.10%	0.6	0.5 – 0.8	<0.001
None	513	40.20%	1.3	1.1 - 1.6	0.005

Male circumcision and sexual behaviour, South Africa 2002

Sexual Behaviour	N	% circumcised	OR	95CI	p
No sexual experience	541	22.40%	Ref		
Abstinent in last 12 mths	378	39.20%	2.2	1.7 – 3.0	<0.001
Mono partner < 12 mths	1822	37.60%	2.1	1.7 – 2.6	<0.001
Multi partners < 12 mths	284	39.80%	2.3	1.7 – 3.1	<0.001

Race and age of circumcision, South Africa 2002

Racial group	Age at circumcision						Total
	< 12 yrs		13-16 yrs		17+ years		
	n	%	n	%	n	%	
Africans	120	16.70%	134	18.60%	465	64.70%	719
White	60	75.00%	6	7.50%	14	17.50%	80
Coloured	69	56.60%	11	9.00%	42	34.40%	122
Indians	66	79.50%	4	4.80%	13	15.70%	83
Total	315	31.40%	155	15.40%	534	53.20%	1004

Home language and male circumcision at age

17 years and older, South Africa 2002

<u>Home language</u>	<u>N</u>	<u>% circumcised at age 17 years and older</u>
IsiXhosa	284	89.10%
SeSotho	68	76.10%
IsiNdebele	19	68.40%
IsiZulu	56	64.40%
SeTswana	51	62.80%
IsiSwati	13	38.50%
Afrikaans	139	38.10%
SePedi	133	33.80%
XiTsonga	43	23.30%
English	161	15.50%
TshiVenda	17	11.80%
Other	17	52.90%

The median age of circumcision and race

- **18 years for Africans**
- **10 years for Coloureds,**
- **2 years for Whites, and**
- **1 year for Indians.**

Place of circumcision and by race

- **The majority (57.2%) were circumcised in the mountains, bush, at initiation school or at home**
- **The remainder (42.8%) were circumcised in hospital as follows:**
 - **97.8% of Whites**
 - **92.8% of Indians**
 - **87.4% of Coloureds**
 - **21.8% of Africans.**

Age of circumcision and HIV prevalence among men, South Africa 2002.

Sub-group	Not circumcised	Circumcised	
		<=12 yrs	13+
	HIV prevalence (%) n	HIV prevalence (%) n	HIV prevalence (%) n
All men in the study	1669 11.00%	264 6.80%*	602 13.50%*
Sexually active men	1316 12.00%	203 8.90%**	568 13.60%**
Africans and Coloured sexually active men	996 15.00%	121 13.20%	538 14.10%

* Total circumcised = 11.1%; ** Total circumcised = 12.3%

Summary

- South Africa has a moderate level of male circumcision in the general population
- This varies by age, race, religion, home language (ethnic group) and province
- The bulk of the circumcisions among Africans occur outside of western medical settings and are carried out mostly both after puberty is reached and sexual activity has commenced
- Male circumcision does not appear to be protective against HIV infection in general.
- However, it seems protective if performed early at pre-pubertal ages rather than later at post-pubertal ages especially after sexual debut.

Implications

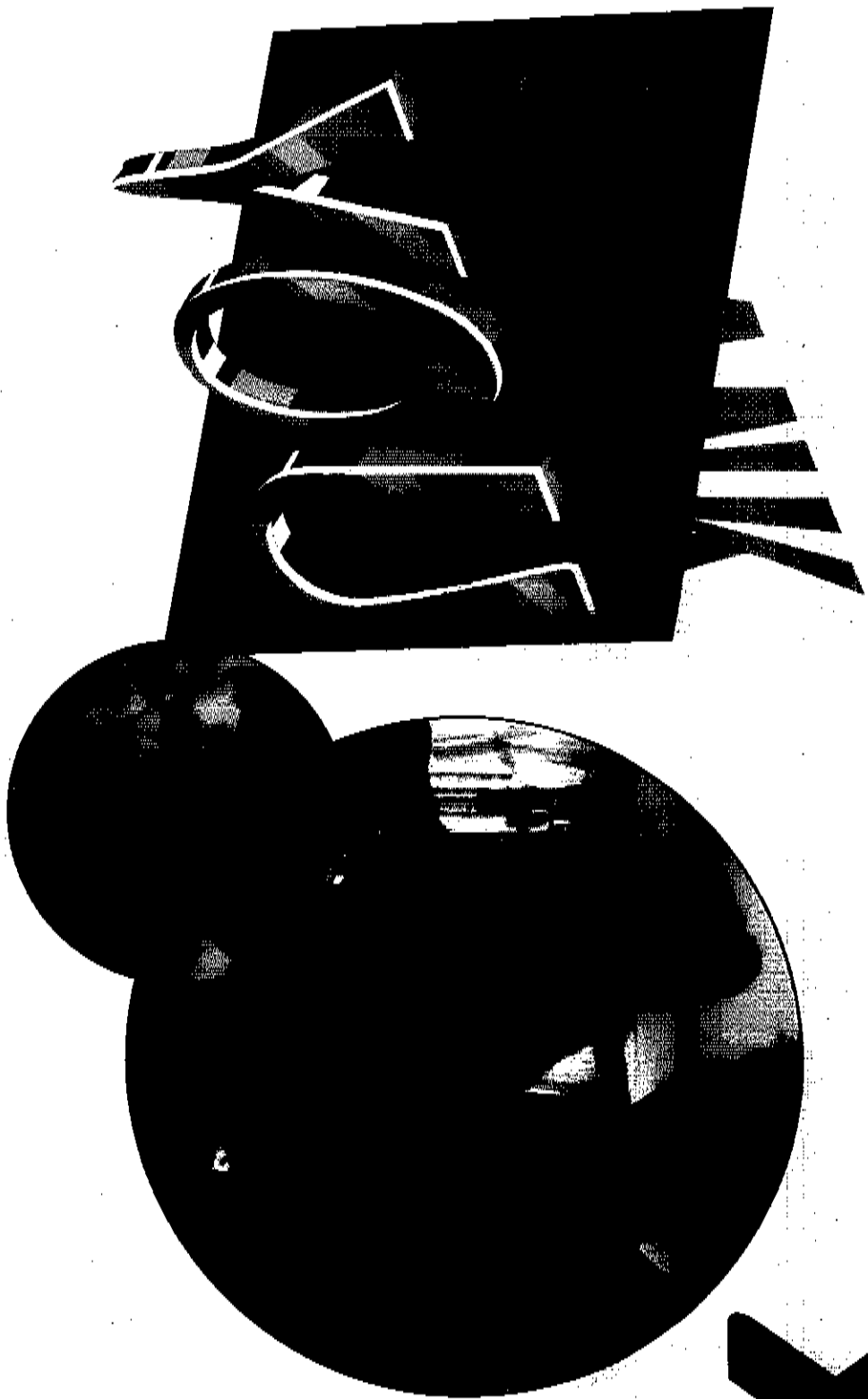
- **There is a need to promote male circumcision among all races and ethnic groups in South Africa especially amongst those that do not normally practice it culturally.**
- **It should be done under sterilised conditions, not necessarily but preferably, in western medical settings especially in cultures that do not practice it.**
- **Among cultures that do so, traditional surgeons must be taught about the importance of safe circumcision practices and good infection control in order to reduce the possibility of adverse events and transmission of HIV infections among initiates respectively.**

Implications (contd)

- **It is recommended that it is probably best if circumcision takes place at pre-pubertal ages, especially before sexual debut in order for it to be more protective against HIV infection.**
- **It is important to continue emphasizing that all males who are circumcised need to also use other known effective safer sex strategies of HIV prevention such as ABC just as much as uncircumcised men should do.**

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 - **South African Medical Research Council (MRC)**



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