Cutting Edge Research:

*Investigating Male Circumcision for HIV Prevention in Papua New Guinea*

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Professor John McBride - James Cook University

Dr David MacLaren - James Cook University

on behalf of the

Acceptability of Male Circumcision for HIV Prevention in Papua New Guinea Study Team
Overview of Presentation

Ms Rachael Tommbe:
Introduction

Professor John McBride:
International HIV Epidemiology, Prevention and Treatment
International Male Circumcision and HIV Prevention

Dr David MacLaren:
Description of Acceptability of Male Circumcision for HIV Prevention in PNG Study

Ms Rachael Tommbe:
Results from Acceptability of Male Circumcision for HIV Prevention in PNG Study

Panel:
Implications and further research
Global HIV Prevalence

GLOBAL REPORT

Figure 2.4
Global prevalence of HIV, 2009

Source: UNAIDS
Impact of HIV


Life expectancy at birth (years)

HIV treatments reduced the number of AIDS cases.
Impact of HIV Treatment

2½ years
Changes in Incidence

GLOBAL REPORT

Figure 2.2
Changes in the incidence of HIV infection, 2001 to 2009

Source: UNAIDS
Figure 2.1

Number of people newly infected with HIV

Dotted lines represent ranges, solid lines represent the best estimate.
HIV in Oceania

GLOBAL REPORT

Figure 2.22

HIV prevalence in Oceania

HIV prevalence among adults aged 15–49 years old in Oceania, 1990 to 2009.

Source: UNAIDS.
Figure 2.23
HIV trends in Oceania

- **Number of people living with HIV**
- **Number of people newly infected with HIV**
- **Number of children living with HIV**
- **Adult and child deaths due to AIDS**

Dotted lines represent ranges, solid lines represent the best estimate.

Source: UNAIDS.
Papua New Guinea

South Pacific country of great diversity
6.8 million people
600 Islands
800 languages
22 provinces
4 regions

87% people live in rural or island villages
HIV in Papua New Guinea

- More than 90% all HIV infections in Oceania are in PNG
- 34,100 people living with HIV in 2009
- 3,200 new HIV infections in 2009
- 1,300 HIV related deaths 2009
- Main transmission heterosexual
- National HIV Prevalence 15-49 yrs 0.9%
  - Southern 1.17%
  - Highlands 1.02%
  - Momase 0.63%
  - New Guinea Islands 0.61%
- Surveillance data suggest some levelling off in spread of HIV in PNG

HIV Prevention

• ABC
  • Abstinence, Be Faithful, Condoms
  • However condoms have been problematic
    • Church opposition
    • Poor distribution, instruction on use
    • Inconsistent use
    • Use of AB but not C endangers women
Male Circumcision and STI

First suggested in mid 19\textsuperscript{th} century that circumcision reduced risk of STI’s

Practice of circumcision quite variable

In Africa, about 30\% of societies do not routinely perform circumcision on newborns.

Countries that have over 80\% circumcision rates have HIV sero-prevalence which is several fold lower.

This is not evident in Europe and US, where major routes of transmission of HIV are IV drug use and in MSM.
### Table 1. HIV-1 seroprevalence in sub-Saharan African and south/southeast Asian countries by estimated proportion of men circumcised

<table>
<thead>
<tr>
<th></th>
<th>&lt;20% circumcised</th>
<th>&gt;80% circumcised</th>
<th>Seroprevalence*</th>
<th>Seroprevalence*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-Saharan Africa</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Zimbabwe</td>
<td>25-84</td>
<td>Kenya</td>
<td>11-64†</td>
<td></td>
</tr>
<tr>
<td>Botswana</td>
<td>25-10</td>
<td>Congo (Brazzaville)</td>
<td>7-64</td>
<td></td>
</tr>
<tr>
<td>Namibia</td>
<td>19-94</td>
<td>Cameroon</td>
<td>4-89</td>
<td></td>
</tr>
<tr>
<td>Zambia</td>
<td>19-07</td>
<td>Nigeria</td>
<td>4-12</td>
<td></td>
</tr>
<tr>
<td>Swaziland</td>
<td>18-50</td>
<td>Gabon</td>
<td>4-25</td>
<td></td>
</tr>
<tr>
<td>Malawi</td>
<td>14-92</td>
<td>Liberia</td>
<td>3-65</td>
<td></td>
</tr>
<tr>
<td>Mozambique</td>
<td>14-17</td>
<td>Sierra Leone</td>
<td>3-17</td>
<td></td>
</tr>
<tr>
<td>Rwanda</td>
<td>12-75</td>
<td>Ghana</td>
<td>2-38</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Gambia</td>
<td>2-24</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Guinea</td>
<td>2-09</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benin</td>
<td>2-06</td>
<td></td>
</tr>
<tr>
<td><strong>South and southeast Asia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td>2-40</td>
<td>Pakistan</td>
<td>0-09</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>2-23</td>
<td>Philippines</td>
<td>0-06</td>
<td></td>
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<tr>
<td>Myanmar</td>
<td>1-79</td>
<td>Indonesia</td>
<td>0-05</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>0-82</td>
<td>Bangladesh</td>
<td>0-03</td>
<td></td>
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<tr>
<td>Nepal</td>
<td>0-24</td>
<td></td>
<td></td>
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</tbody>
</table>
Male Circumcision and STI

- Meta-analyses
- Circumcision associated with a RR of syphilis of 0.67
- In HSV RR of 0.88 (CI 0.77-1.01)
- Chancroid was associated with a lower risk in 6/7 studies (RR 0.12-1.11)
Acceptability of Male Circumcision

- Uganda – 29% of U/C men would prefer to be circumcised
- Kenya – this figure was 60% (70% in 15-21 year olds)
- Similar proportions of women would also prefer circumcised partners and 88% would like their male children circumcised
- Private clinics are becoming popular
Male Circumcision and HIV

• 2005: South African Study 3,274 men
  60% reduction in HIV transmission in circumcised men

• 2007: Ugandan Study 4,996 men
  51-53% reduction in HIV transmission in circumcised men

• 2007: Kenyan Study 2,784 men
  53-60% reduction in HIV transmission in circumcised men

• WHO/UNAIDS recommend that Male Circumcision
  – be recognized as an additional strategy in a comprehensive HIV prevention package in populations where HIV is primarily heterosexually acquired, there is a generalized epidemic and relatively few men are circumcised.
  – be evidence based and responsive to the local contexts

Biological Mechanism

Fig. 2. A single Langerhans' cell (green) in the outer foreskin with dendritic processes extending towards the epithelial surface (630 × magnification).

Fig. 3. (a) Flaccid uncircumcised penis. (b) Erect uncircumcised penis with the foreskin retracted showing likely sites of HIV-1 entry.
Establishing Partnerships, Pilot and Multi-Site Study

- 2008 JCU and PAU discuss partnership to investigate male circumcision for HIV prevention in PNG
- Jan 2009 Prof McBride facilitated workshop at JCU Cairns to discuss plan pilot study
- 2009 PNG National AIDS Council funds PAU to undertake Pilot study
- 2010 - 2012 NHMRC funds PAU/DWU/JCU 3 year multi-site study
Investigating Male Circumcision in Papua New Guinea

The *Acceptability of Male Circumcision for HIV Prevention in PNG* study is at 4 sites in PNG where people from across the country come to study or work.

- Describe and categorise male genital cutting
- Examine social, cultural and religious understandings and practices of male genital cutting
- Assess the capacity of health providers to deliver male circumcision services.

Porgera: Gold Mine

Madang: Divine Word University

Port Moresby: Pacific Adventist University

Popondetta: Oil Palm Plantation
Data Collection

- 869 male & 519 female structured questionnaires
- 40 male & 24 female semi-structured individual interviews
- 36 male & 10 female Focus Group Discussions
- 309 male clinical examination by medical professional

Ethics approval by JCU, DWU, PAU and PNG National AIDS Council
Demographics of Participants

**Age of Respondants**

- **Male**
- **Female**

**Marital Status Participants**

- **Single**
- **Married**
- **Separated**
- **Divorced**
- **Widow**

**Province of Origin**

- **Male**
- **Female**

**Church Affiliation**

- **Male**
- **Female**
Sexual Practices

Average age first sex:
Male: 18.1 years (Range 5-40)
Female: 20.4 years (Range 4-37)

Sex Ever in Life

Age at First Sex
## Types of Penile Cuts

Multiple types of penile cutting reported. Three broad classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Definition</th>
<th>Percentage (Number)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No foreskin cut</td>
<td>The prepuce has not been cut</td>
<td>43% (n= 369)</td>
</tr>
<tr>
<td>Longitudinal foreskin cut</td>
<td>Any form of longitudinal incision of the prepuce which does not remove the prepuce but exposes the glans</td>
<td>47% (n= 400)</td>
</tr>
<tr>
<td>Circumferential foreskin cut</td>
<td>Full removal of the prepuce with full exposure of glans</td>
<td>10% (n= 88)</td>
</tr>
</tbody>
</table>

**Images:**
- No cut
- Longitudinal cut
- Circumferential cut
Longitudinal Foreskin Cuts
Age and Foreskin Cutter

- Average age longitudinal cut 17.0 years (Range 2-38)
- Average age circumferential cut 14.8 years (Range 1-30)
Location of Foreskin Cutting

Location of Foreskin Cutting

- bush/plantation
- clinic/hospital
- traditional man's house
- urban house
- school
- river
- village

longitudinal cut
circumferential cut
Tool Used to Cut Foreskin

- **Razor Blade**: Longitudinal cut
- **Surgical Blade**: Circumferential cut
- **Needle and Rubber**: Longitudinal cut
- **Scissors/knife**: Longitudinal cut
- **Bamboo**: Circumferential cut
- **Don't know**

Percentage of Participants
Tool Used to Cut Foreskin
## Penile Cutting as part of Initiation

<table>
<thead>
<tr>
<th></th>
<th>Longitudinal Cut</th>
<th>Circumferential Cut</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td>28% (n=81)</td>
<td>42% (n=32)</td>
</tr>
<tr>
<td><strong>No</strong></td>
<td>72% (n=214)</td>
<td>58% (n=45)</td>
</tr>
</tbody>
</table>
## Penile Inserts and Injections

<table>
<thead>
<tr>
<th>Location</th>
<th>Injected Substances into Penis</th>
<th>Attachments or Inserts into Penis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (2.9%)</td>
<td>No (97.1%)</td>
</tr>
<tr>
<td>DWU</td>
<td>6 (2.9%)</td>
<td>202 (97.1%)</td>
</tr>
<tr>
<td>PAU</td>
<td>4 (2.0%)</td>
<td>200 (98.0%)</td>
</tr>
<tr>
<td>Porgera</td>
<td>12 (5.3%)</td>
<td>215 (94.7%)</td>
</tr>
<tr>
<td>Popondetta</td>
<td>41 (18.5%)</td>
<td>181 (81.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>63 (7.3%)</td>
<td>798 (92.7%)</td>
</tr>
</tbody>
</table>
Remove foreskin if reduce risk of HIV

**No Penile Cut: Remove if Reduce Risk of HIV**
- Yes: 71%
- No: 16%
- Maybe: 13%

**Already Split: Complete Removal if Reduce Risk of HIV**
- Yes: 84%
- No: 16%
Remove foreskin of child if reduced risk of HIV

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Unsure</th>
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</thead>
<tbody>
<tr>
<td>Female</td>
<td>73.8 % (313)</td>
<td>8.5% (36)</td>
<td>17.7% (75)</td>
</tr>
<tr>
<td>Uncut Men</td>
<td>86.8 % (250)</td>
<td>13.2% (38)</td>
<td></td>
</tr>
<tr>
<td>Longitudinal Cut Men</td>
<td>93.4 % (285)</td>
<td>6.6% (20)</td>
<td></td>
</tr>
<tr>
<td>Circumferential Cut Men</td>
<td>91.4 % (53)</td>
<td>8.6% (5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>no foreskin cut</td>
<td>32.8% (104)</td>
<td>67.2% (213)</td>
<td></td>
</tr>
<tr>
<td>straight cut</td>
<td>32.4% (110)</td>
<td>67.6% (229)</td>
<td></td>
</tr>
<tr>
<td>round cut</td>
<td>34.7% (25)</td>
<td>65.3% (47)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32.8% (239)</td>
<td>67.2% (489)</td>
<td></td>
</tr>
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</table>
Reasons for Penile Cutting

• Cultural
• Health
• Sexual
• Biblical
• Peer influence
• Partners influence
• Parents decision

Quotations used for this presentation are indicative of the responses provided (not outliers/exceptions)
Reason - Cultural

❖ Cultural Practice

_Taim yu kam through long disp’la process em bai yu ken go attendim ol bikp’la bikp’la bung b’long ol bikman. Yu speak bai ol man respect; em man toktok ia, kain olsem._

[Translation] When you go through this process you can attend big gatherings with elders. When you speak, men will respect you and say, he is a man now – this kind of thing.

❖ Entering manhood

To be a man so that other boys will see you and they will say, you are a man.

The initiating ceremony is practiced and noted in my area to be very important because it mould a male child into adulthood.

❖ Community acceptance

_if you no circumcised na yu marit, bai ol man mekim funny long yu, bai yu nonap pilim gutp’la long kam aot na raon._

[translation] if you are not circumcised and you are married, then men will make fun of you, and you will not feel comfortable to walk around in public

❖ Spiritual Beliefs

Male circumcision is culturally practiced in Morobe Province at the age of 16 years. Going through the initiation ceremony the young person receives supernatural power from the elders.
Reason – Cultural

Body Cleansing

*taim yu katim skin b’long kok b’long yu, em kain olsem yu raosim blood nogut ia – blood we mama karim yu long en ia, yu raosim i go na niup’la blood we i kam, em bai mekim olsem yu bai grow, or strong na muscel*

[translation] When you cut you foreskin, it is like you remove bad blood – your mothers blood from during childbirth, you will remove it and new blood will come, it will make you grow strong and muscular.

It was believed by the elderly persons that MC was done to remove mother’s blood and prepare to change into manhood particularly preparing towards having basic human need of good and safe sex.

In my area the people, the youths tend to circumcise the other youths. When doing circumcision, they’ll ask them when you were born, you formed from the blood which belongs to your mother like that and than if, when go for circumcision, it‘s a way which you will remove the dirt or dirty blood and after that you eat, you will grow well built when doing this.
**Reason – Sexual**

- **Obtain good sexual pleasure**
  For sexual pleasure to obtain good pleasure of having sex

- **Prolong Ejaculation**
  Sex save longpla na sweet na man ino save kapsait hariap. [translation] Sex is for longer and sweeter and man does not ejaculate quickly
  To prolong ejaculation that will satisfy me and my partner too which they express they are happy when having sex with me

- **Sexual satisfaction to partner**
  Blo givim more feelings lo meri. Meri too bai singaut. [translation] To give better satisfaction to women. Women will yell (with excitement).
  Just to give pleasure to women in order that they won’t forget me

- **For Erection**
  You can koap 2 or 3 raun [translation] you can have sex 2 or 3 times
  Avoid weakness of the erect penis while having sex

- **Penile Enlargement**
  Taim yu katim skin nau stik blong yu bai olsem, bai yu rausim olpela blood na olsem stik blong yu bai bikpela. [translation] when you cut the foreskin from your penis you will remove the old blood and your penis will become big.
  Taim yu katim stik blong yu bai em kamap bikpela na yu ken silip wantaim ol bikpela meri [translation] When you cut your foreskin your penis will become big and you can have sex with older women.
Reason - Health

- **Prevention of STI/HIV**
  To prevent or reduce risk of getting infected with STI
  To keep it clean so as to protect myself from STDs

- **Personal Hygiene**
  To prevent odours/offensive smell
  To keep my penis clean and healthy at all times
  *Skin stap dirty ba pulap inside long skin so mi cuttim to keep my penis clean* [translation] when there is foreskin it will collect dirt under the foreskin, so I cut it to keep my penis clean

- **Strong and Healthy**
  Believing that it would become strong and healthy
  I want to become strong and healthy person

- **Medical Reasons**
  I was told to remove due to health reasons (penis tighten by the foreskin)
  My mum told me that it was for health reason. I did not urinate well when I was small so they remove my foreskin which I am happy they did
Reason – Biblical

- **Positive Views**
  
  God instructed that Jesus to be circumcised and because of that I did it as a believer.

  If Jesus can do it, He set an example so why not practising it.

  Bible encourages circumcision so why not practising MC as Christians.

- **Negative Views**
  
  *Supos God em wokim man wantaim skin larim stap olsem*

  [translation] If God created man with foreskin then just leave it alone.

  *Noken bagarapim creation bilong God na katim skin nating nating*

  [translation] Don’t spoil God’s creation by cutting the foreskin unnecessarily.
Influence from Others

❖ **Peer Influence**

My friend recommended me to do so we can be looked up at just like other boys in the school. The bigger boys forced me to do it while I was in Junior High school.

❖ **Partners Influence**

*Meri save laik kaikai kok blong man blong em, save laikim kela so ol bai kaikai gut na nogat smell*

[translation] Women like to have oral sex with her man, she will prefer circumcised penis so with will be good and have no smell.

My girl friend told me that she prefers circumcised men so I did it.

❖ **Parent’s Decision**

My father and mother decided on that but I appreciate this decision as I think it is a clean idea.

*Taim ol pikinini olsem two weeks papa na mama save karim go long ol village specist long rausim skin*

[translation] When a child is two weeks old their father and mother takes them to a village expert to remove the skin.
What do women think about male circumcision?

- What do women think are the good things about male circumcision?
- What do women think are the bad things about male circumcision?

And we asked about lots of other things too!
Results: Positives for women

8 major themes identified:

• Health
• Sexual pleasure
• Religion
• Cultural
• Masculinity
• Maturity
• Sense of happiness/satisfaction
• Sense of safety

Photo Credit: http://4.bp.blogspot.com/hH816pItiZyA/TdPpHspwSpi/AAAAAAAAABpY/ru1yHwSYzfE/s1600/ghity.bmp
Health and Sexual Pleasure

● Health

Prevent cervical cancer and infections
A women with partner who has a round cut has the low risk of developing cervix cancer

Clean and Healthy
Avoid smell and other infection that her husband will release during sex

Prevention of STI/HIV
Em bai aburisim ol kainkain sik olsem gonoria, sipilis or ol arapela kain sik
[translation] He will avoid contracting sickness like gonorrhea, syphilis and other STIs

● Sexual Pleasure

Sait bilong slip wantaim man bilong mi, em mi save pilim gut bikos, em nogat skin bilong kok na em save smooth tasol. [translation] In relation to having sex with my husband, I feel good because there is no foreskin and its just smooth

Give more sex to her partner because of the sexual pleasure she gets.
Masculinity, culture, religion

- **Masculinity**
  And from what I heard is like, they look, from what I heard from my girlfriends that the boys from their village, like when they are circumcised they look healthy, they look strong, they look like fit and they look handsome.

- **Culture**
  Circumcision is done to give him strength. This is a good culture.

*The boys will lose those bad blood. Taim ol lusim dispela bai ol grow healthy or strong. Em gutpela long kastom sait.* [translation] The boys will lose those bad blood, when they remove this they will grow healthy and strong. It is good for the culture.

- **Religion**
  Even Jesus himself was circumcised; we must always remember that... Jesus was circumcised.

- **Happiness and satisfaction**
  She would not leave her husband and go having sex with other men because she would feel comfortable and more enjoyable because of the desires, feelings and pleasures
Results: Negatives for women

8 major themes identified:

- Men more sexually active/aroused
- Sex with many women
- Unsafe outside of health care setting
- Pain and healing
- Changes to penis
- Inserts and injections
- Risks: STIs, domestic violence and divorce
- Culture
Sexual Activity

❖ **Men want more sexual activity**

I heard from people that men who are circumcised easily get into sexual relationships, they feel sexually active at any time.

He will want to sleep with his wife all the time and if there is no family planning they are likely to produce many children that are un-plan.

❖ **Men want sex with many women**

I think it might encourage the husband to have more sexual partners thus might easily contract the disease.

Man will have uncontrollable penis because most of the time they will be erected and the sexual desire will be so high. This cause man to be unsatisfied with one woman and so will be looking for sexual partners/places to satisfy them ever erecting penis.
Unsafe cutting, Pain and Healing

 Unsafe Cutting

Bleeding can occur if not cut well. For example, my cousin almost bled to death because his peers did not do a proper cut. He almost fainted because he lost a lot of blood. And we have to take him to the hospital.

Pain and Healing

Taim ol katim pikinini mi no save wanbel bikos em pikinini tumas nae em bai pilim planti pain. [translation] when they are doing circumcision on children, I do not like it because he is too young and the child will feel a lot of pain.

Having a round cut is massive, and negative change is that it would take a long time to heal. Thus meaning that we won’t have sex for a long period of time.
Changes to penis

- **Changes from circumcision/cutting**

  Sometimes I feel that his penis are growing into an extra ordinary thing and I don’t enjoy having sex with him.

  I think the penis would become smaller or decrease in size and the woman would not enjoy sex as she would.

- **Changes from inserts and injections**

  Inserts are terrible. A patient seen at the hospital had a big cut. Somebody was using this bearing and he had slept with a woman and then she has got a big cut on the vaginal wall. So I asked her, what happened and she said I don’t know I was sleeping with this man and I don’t know what happened.

  Wanpela man em kisim sut na samting blong em go bipela na strong na meri bilong em prait na ronowe [translation] A man had injection that enlarged and hardened his penis and the wife got scared and ran away.
Domestic Violence and Family Problems

Em bai laik slip wantaim meri bilong em olgeta taim, everyday em bai no nap rest, even though meri pilim les. still em bai go out na painim narapela na causim femli problem. Sampla taim em ken forcm na paitim you bicos em no nap kontrolim sense blo em.

[translation] He will want to have sex with his wife all the time, he will not rest from having sex every day, even though the wife is tired, he will still look for other women which brings family problem. Sometimes he can force and beat you because he could not control himself.

Culture

Circumcision is not common in other parts of PNG and women may not accept it in the beginning but educating and making awareness of the positive results can change all that.
Regional variation for MC

- New Guinea Islands
- Momase
- Highlands
- Southern

- Uncircumcised
- Dorsal slit
- Fully circumcised
- HIV Prevalence %
FIGURE 1. The Shang Ring consists of an inner and outer plastic ring. The inner ring has a silicone band around its outer surface.
Summary

• There is a great diversity of foreskin cutting and ‘Male Circumcision’ practices reflecting the diversity of the country
• Most foreskin cutting were longitudinal cuts performed during teenage years or early adulthood by a friend or family member
• Most uncut men would be willing to have their foreskin removed if it reduced the risk of HIV
• Most men with existing longitudinal cut would have remnant foreskin removed if it reduced risk of HIV
• The majority of men and women would remove the foreskin of their male child if reduced the risk of HIV
• There was no difference in condom use at last sex between cut and uncut men
• There is an apparent high acceptability of male circumcision among men and women at these 4 sites.
Interpretations and implications

• There are a wide range of social, cultural and religious reasons for foreskin cutting in Papua New Guinea.
• There was a wide variety and sometimes conflicting responses by women.
• Many women highlighted the health benefits and increased sexual pleasure if men are circumcised.
• Key negative responses included: men desiring more sex, unsafe circumcision practices, physical and emotional pain for women and negative change to expectations of women as sexual partners.
• Any potential male circumcision for HIV Prevention programs in Papua New Guinea need to take into account this wide range of traditional and contemporary penile cutting practices, reasons these cuts are being done and perspectives from women.
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