

Swazi men's perception of the protective effect of male circumcision and its implications for HIV prevention strategy

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Abstract

Background: For years, male circumcision (MC) has been known to reduce the risk of sexually transmitted infections (STIs). Of late, MC has been recognised and recommended as a complementary HIV preventive measure in high prevalent areas. The objective of this study was to assess the perceptions of Swazi men about the protective effect of circumcision against STIs including HIV, and its implication to the mass MC strategy.

Methods: An explorative qualitative study was conducted targeting men aged ≥18 years seeking services at Family Life Association of Swaziland clinic in Mbabane, Swaziland. Unstructured individual face-to-face interviews were conducted for 17 men.

Results: Results showed that Swazi men perceived the protective effect of MC differently, ranging from perceptions of ineffectiveness and unworthy, especially against HIV, to perceptions of total protection and a solution to all STIs. Perceptions were influenced by the ongoing circumcision campaigns, individual knowledge of biological sciences, misconceptions as well as life experiences. Promiscuous men were more likely to have a positive perception and acceptance of the procedure than their non-promiscuous counterparts.

Conclusion: Swazi men hold mixed perceptions about MC, accounting for its relatively low uptake. The relatively low uptake of circumcision does not necessarily imply failure of the strategy but rather a natural selection of the most relevant and at-risk portion of the population. It is recommended that more effort be put towards correcting misconceptions and convincing those who still hold a negative perception about the procedure.

Keywords: male circumcision, HIV/AIDS, sexually transmitted infections, perceptions, Swaziland

Introduction

Circumcision, the partial or total removal of the foreskin, is one of the oldest and most common surgical procedures worldwide, dating back to biblical times (WHO, 2009). About 30% of all men worldwide are circumcised (WHO & UNAIDS, 2007). Reasons for circumcision vary from one nation or tribe to another depending on the meaning and significance attached to the procedure. Globally, majority of people are circumcised for religious reasons, where the act is perceived as a requirement for a perfect relationship with God.

Of late there has been a growing perception of circumcision as a protective measure against sexually transmitted infections (STIs). Studies have shown that circumcised men and/or their sexual partners have a lower risk of contracting STIs, including HIV (Meier *et al.*, 2006; Weiss *et al.*, 2006). Likewise, circumcised babies are less likely to develop urinary tract infections as compared to their uncircumcised counterparts (WHO & UNAIDS, 2007). Several biological mechanisms have been put across to explain this protective effect. It has been proven that the area under the foreskin, being warm and moist, is quite conducive for flourishing of pathogenic and/or floral bacteria especially when coupled with poor genital hygiene. These bacteria may end up causing diseases on the genitalia or ascent to infect the bladder and kidneys (Wiswell, 2000; AAP, 2012). Histological studies have also shown that the inner lining of the foreskin is more thinly keratinised than the penile shaft (McCoombe & Short, 2006). This makes it more susceptible to lesions secondary to minor abrasions or ulcerative genital disorders, thereby facilitating infection by agents like the Human Immunodeficiency Virus (HIV) (AAP, 2012). In addition, studies have also

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reported that the HIV target cells, namely the CD4+ T cells, macrophages and Langerhans cells, which express the CCR5 and CXCR4 HIV-1 co-receptors, are found in larger numbers and more superficially on the inner foreskin than anywhere else on the penis (Patterson *et al.*, 2002). Thus, the foreskin provides not only an effective, but also a larger surface area for invasion by HIV (Kigozi *et al.*, 2009)

With the continued global HIV epidemic and the known synergistic relationship between HIV infection and STIs, the protective effect of circumcision against infections has recently gained popularity in global public health practice. A number of countries recently embarked on mass male circumcision following an announcement by the World Health Organisation and United Nations Programme on HIV/AIDS of the recognition of circumcision as an additional preventive measure for HIV heterosexual transmission (WHO, 2007a). This exercise was particularly important and necessary for those countries with high HIV prevalence and a low prevalence of male circumcision.

Swaziland, with the highest HIV adult prevalence globally, estimated at about 26.3%, and a male circumcision prevalence of just 8.2% as of 2007, also adopted the recommendation. The government in collaboration with non-governmental organisations formulated a National Male Circumcision Policy in order to scale-up male circumcision. The policy targeted circumcising up to 80% of all men aged 15-24 years over a five-year period (MoH, 2009). Despite the country's effort to scale up male circumcision, the uptake of the procedure remains low and way below targets. When the campaigns peaked up in 2011, only 11,000 men were circumcised out of the projected target of 41,300 (USAID, 2009; Reed *et al.*, 2012). As of March 2012, a total of 38,912 men have been circumcised, which is about 21% of the projected target of 183,450 by 2015 (AVAC *et al.*, 2012). The figure rose to 26.2% by the end of 2012 (WHO, 2013), and 31.7% by the end of 2013 (WHO, 2014).

While many factors may be implicated in the low uptake of MC in Swaziland, according to the Health Belief Model, people's perception about the benefit and effectiveness of a preventive measure is crucial in determining the uptake of the preventive measure by the target population (Witte, 2007). Since the onset of male circumcision campaigns in Swaziland in 2009, publicising the protective effect of the procedure against infection, the perceptions of Swazi men about this protective effect has not been clearly evaluated and precisely documented. In the absence of infrastructural and technical barriers for MC in Swaziland (Adams, 2012), the low uptake of the procedure raises suspicion about Swazi men's perception of MC and its benefits, and its implication to the mass MC strategy for HIV prevention. This study aimed at assessing the perceptions of Swazi men about the protective effect of circumcision against STIs, including HIV and AIDS, and subsequently deriving the implication of these perceptions to the ongoing mass MC strategy.

Materials and Method

Study setting and design

The study was conducted at a clinic operated by the Family Life Association of Swaziland (FLAS) in Mbabane, Swaziland. Mbabane is the capital city of the country, in which people from all over the country converge for various economic and social activities. FLAS clinic is one of the major providers of sexual and reproductive health services, including MC services, in the country.

A qualitative research design was used targeting all men aged 18 years or older attending FLAS clinic during the period 28th of June to the 11th of July 2012. Participants were identified through convenience sampling as they came for services at the FLAS clinic. Data were collected through unstructured individual face-to-face interviews, in which participants were asked open ended questions regarding their perceptions about the protective effect of circumcision against infection. Views of their colleagues with whom they often discuss the subject in the community

were also explored. With the participants' permission, the interviews were audio-taped. In addition, non-verbal cues were recorded in the form of field notes. Sampling and data collection were done concurrently and continuously until data saturation was attained. Prior to data collection, ethical approval was obtained from the Ministry of Health [Swaziland] Scientific and Ethics Committee. In addition, permission to conduct the study was also granted by the FLAS Research and Evaluation Unit as well as.

Data analysis

Data were analysed manually using the generic process of qualitative analysis. This involved transcribing the audiotapes and merging the transcript with the field notes; identifying, coding and categorising similar segments from the transcript; identifying and describing separately each emerging theme, and ultimately interpreting the data to come up with a comprehensive description of Swazi men's perception of the protective effect of MC against infections, and its implication to the mass MC strategy of HIV prevention.

Ethical considerations

This study received ethical approval from the Swaziland Ministry of Health Scientific and Ethics Committee. In addition, permission to conduct the study was also granted by the FLAS Research and Evaluation Unit. The study was explained and a written consent obtained from each participant.

Results

Characteristics of participants

A total of 17 men took part in the study. Participants were aged between 19 and 42 years of age, comprising of those who were married (2/17), single (15/17); circumcised (4/17), uncircumcised (13/17); attending school (6/17), working (6/17) and unemployed school-leavers (4/17). Participants were from different parts of the country, rural and urban. Sixteen of the 17 men were Swazis and one who was a Mozambican but has been residing and working in Swaziland for more 10years. A significant number (5/17) had been staying in neighbouring South Africa at one point, working, pursuing their education or visiting relatives. All were Christians except one who had no specific religious affiliations. All participants had heard about, and participated in the ongoing campaigns for circumcision and their perception about circumcision were as follows.

Swazi men's perception of circumcision

Results showed that there is a wide range of views and feelings about circumcision, ranging from perceptions of no benefit at all to perception of total protection from some or all STIs (Table 1).

Table 1: Swazi men's perception about the protective effect of circumcision against STIs

Theme	Categories/Description
Circumcision has no protective effect against HIV.	HIV is a unique and deadly infection
Circumcision can prevent some diseases	- Circumcision as a solution to STIs - Circumcision reduces the risk of HIV/AIDS and cervical cancer.
The magnitude and significance of the protective effect of circumcision is perceived differently	- Perception of total protection from these infections - Perception of insignificant and unworthy benefit
Circumcision complements other primary preventive measures	Where abstinence, faithfulness and/or the use of condom fails or is impossible, circumcision helps

Circumcision has no protective effect against HIV

Despite intensive circumcision campaigns sensitizing people about the reduction of HIV transmission risk by circumcision, some men have not yet been convinced. They perceive HIV as a unique and deadly disease which cannot be prevented by circumcision. One participant commending on the published protective effect of circumcision against HIV transmission said: *"No, it's a rumour from people who are not properly informed about this circumcision procedure. Because I don't think ... Actually it's not true that when you are circumcised you don't get HIV easily. It's just a rumour circulating."* Another one with the same view confirmed this widely held view by saying: *"I still don't believe, I think it's the same."*

Similarly, when asked whether HIV was among the sexually transmitted diseases that he intended to prevent by circumcision, another participant said: *"No, not HIV. HIV is a fatal disease. You can get HIV even if you are circumcised."* Thus, according to him other STIs can be prevented by circumcision but not HIV. The protective effect of circumcision against diseases in general was a widely held perception as elaborated below.

Circumcision can prevent some diseases

From the various sources of information, mainly circumcision promoters and then formal school science education, Swazis believe that circumcision can protect one from contracting certain diseases as advertised on the media. Apparently a significant number of men have opted to be circumcised based on this perception. One such participant explained as follows: *"You know it's because every time I listen over the radio, or I see on the television, you see, if you circumcise, there are many opportunities to be protected from now getting many sicknesses ... so, that's why I came here to be circumcised"* However, there were some slight variations on the perceived magnitude of protection as well as the specific diseases against which circumcision can protect. Commonly cited diseases were sexually transmitted infections (STI), HIV/AIDS and cervical cancer.

Apparently the term STI was used to refer to those infections or disorders which are characterised by observable clinical manifestations on the external genitalia. Commonly cited were gonorrhoea, termed drop, and other disorders which present as penile ulcers or lesions. Based on messages from the circumcision campaigns, all participants were convinced that circumcision can prevent such sicknesses. As such some perceived it as a solution to their recurrent STIs. Explaining his reason for being circumcised, one participant said: *"The problem is I was getting STIs from my girlfriend, that's why I decided to come here and be circumcised."* Another one with similar experiences said: *"Early January, [2012] I had an STI, my penis was cracking. So when he [a circumcision promoter] told me that it [circumcision] reduces the risk of getting STIs and HIV, I decided to circumcise."*

To some, the circumcision campaigns served as reinforcement to their prior knowledge about the protective effect of circumcision, as evidenced by this quotation from one participant: *"I studied life sciences [At High School level in South Africa] – Biology – in the past. So that subject inspired me that when you circumcise you can get this, you can prevent this. So, afterwards I discovered in televisions and radios that it was true."* On the media, the main emphasis was on prevention of HIV, and secondarily other diseases, including cervical cancer.

While HIV/AIDS was perceived as a different and unique infection from the so called STIs, some believed that its risk can also be reduced by circumcision, especially those who understood the mechanism of action of circumcision in preventing infections, as one participant explained: *"Their [the media] main point is that it [circumcision] reduces the risks of one getting STIs, because they say in that part of the penis when it is still covered there will be a build-up of germs, and stuff like that; it's soft and when you indulge in sexual intercourse it's easy for that soft skin to get some cuts and stuff like that, then there will be that exchange of blood, so if you circumcise, it hardens up a bit so it's not easy for it to be cut."*

On the other hand, some also felt that MC reduces the risk of cervical cancer. From this perspective, women were mobilising the sexual partners to go for circumcision as portrayed by this quotation from one participant who had undergone the procedure: *"She [my girl-friend] was more concerned about cervical cancer, because she heard that when one is circumcised, it reduces problems with women – cervical cancer, because really these days cancer is common all over the place."* In addition to the type of diseases prevented by circumcision, the magnitude of protection offered was also perceived differently. The following section elaborates on this.

Perceptions about magnitude and significance of the benefit of circumcision

Results showed that some people perceive circumcision as rendering total protection against all STIs. One participant who had witnessed this but personally understood this to be a misconception remarked as follows: *"It's just that what maybe most people usually think is that when you are circumcised you are immune to sexually transmitted disease and even maybe AIDS. ... I have met some people who hold that view."* Another participant who has been influenced to share the same line of thinking said: *"Because nowadays most of the people around my area are already circumcised and they give me more advise about circumcision, about the STIs, HIV and AIDS; you are so safe when you are circumcised."* Similarly, another participant who had been circumcised a year ago testified to have had four girl friends in series and has had unprotected sex with each of them said: *"When we are having sex, 1, 2, 3 rounds, so the last one I don't use a condom because the sperms are not strong, stronger than the initial ones."* Thus, he was only worried about preventing pregnancy, not STIs. On the other hand, non-promiscuous participants had a different perception on the benefit and worthy of circumcision.

Some respondents who believed and understood that circumcision, in principle, reduces the risk of acquiring HIV still felt that this benefit was not a sufficiently compelling motive to be circumcised, based on their knowledge of their own sexual behaviours. One participant remarked as follows: *"OK, on the aspect of HIV, I am a Christian, as you know, and I am not somebody who sleeps around, so if we [my sexual partner and I] know our status and we remain faithful to each other, then I think it's the way to go. The issue of HIV is there, but I can't dwell much on it, because it's not a primary concern [for me], since I know how I conduct myself [I know my sexual behaviour]."*

Circumcision complements other primary preventive measures

Results show that participants were aware of the conventional ways of preventing themselves from sexually transmitted diseases, that is, abstinence (A), being faithful to one partner (B) and correct and consistent use of condom (C). However, they acknowledged the fact that this A B C method may at times fail or may not be applicable. Circumcision is perceived as a rescue strategy in these circumstances. Explaining how abstaining may be impossible, one participant said: *"With the issue of abstaining, if you have tested [sex] you will always want ... it's kind of hard ... they do it [abstaining] when you are under a situation like you are in jail, something like that, you can abstain, by force, yah. But voluntarily it's not easy to abstain, once you have tested. Maybe for the younger ones that haven't been exposed to it can abstain but you as an adult since you have been exposed you will want, again and again."*

Similarly, to a married couple who wish to have a child, abstinence and the use of a condom are inapplicable. In addition, it was also felt that chances of getting married to an HIV positive partner could not be ruled out. Regarding faithfulness to one partner, one participant remarked as follows: *"In terms of faithfulness, you can be faithful but sometimes we are tempted, everyone is tempted even if you are a Christian, even if you are what, we are tempted, we are in this planet, we are tested, challenges are there, so I may not guarantee myself to be faithful because temptations are always there."* Other participants also added that even if they are sure of their

faithfulness, the same may not be guaranteed by the partner, as one openly said: “I don’t trust people. Girls cheat [have many sexual partners] so much.”

In terms of correct and consistent use of condoms, it was generally believed that they are also not 100% effective, as one participant remarked: “Condoms are made by humans. Everyone makes mistakes. The one who makes condoms may make a mistake and the condom may burst along the process.”

Discussion

Results of this study are quite consistent with current observations and publications regarding perception of circumcision as a protective measure against STIs, including HIV (WHO, 2006; Westercamp & Barley, 2007; News24, 2008; Circumcision campaign clouding HIV issues, 2011). Such observations include a mixture of feelings and reactions to the procedure, depending on individual’s circumstances. Results of this study show that Swazi men believe and acknowledge the fact that MC offers some protection against STIs in general, and this is a sufficient cause for them to be circumcised. Consistent with these findings, it has been noted that in the industrialised English-speaking countries, the practice of MC has been fuelled by, among others, the perception that it improved penile hygiene and lower the risk of STIs (WHO & UNAIDS, 2007). Likewise, a study by Westercamp & Barley (2007) revealed that acceptability of MC in sub-Sahara Africa, including Swaziland, is partly influenced by perceptions of its health benefits, that is, infection prevention. The majority of clients who requested for MC at a teaching hospital in Zambia cited its protective effects against STIs including HIV, as the main motive for preferring to be circumcised (Bowa & Lukobo, 2006). In a national survey conducted in 2010, slightly over half of Swazi men aged between 15 and 59 years cited health and hygiene as their main reason for choosing to be circumcised (SCSO & UNICEF, 2011). This perception accounts for the relatively sharp increase in demand for the procedure since the beginning of the campaigns (WHO, 2006, 2014; Reed *et al.*, 2012).

On the other hand, results also show that despite the circumcision campaigns, HIV is still perceived as a unique STI which cannot be prevented by circumcision. In support of this view, the Swaziland Multiple Indicator Cluster Survey (MICS) 2010 reported that only 22% of circumcised people cited prevention of HIV as the reason for their circumcision (Central Statistical Office [Swaziland] & UNICEF, 2011). Given that prevention of HIV is the mainly emphasised benefit of the procedure, this explains why the uptake of circumcision has been way below the set targets as described in the introduction section (Nqeketo, 2010; AVAC *et al.*, 2012). This calls upon for a re-strategizing of the circumcision’s campaigns in order to influence people’s perceptions. Apparently a focus on the scientific and pathophysiological (Patterson *et al.*, 2002; McCoombe & Short, 2006; Kigozi *et al.*, 2009; AAP, 2012) than the epidemiological (Auvert *et al.*, 2005) explanation of the protective effect of circumcision would be more convincing.

While some Swazi men understand and believe in the protective effect of MC in theory, practically it is perceived as unnecessary. Majority of Swazis are Christians (Central Intelligence Agency, 2014; NationMaster.com, 2014), and results show that from the Christianity perspective, STIs, including HIV, are associated with immoral sexual behaviour, promiscuity. If circumcision is meant to prevent such illnesses, then to Christians it is unnecessary and not worthy undergoing since promiscuity is not expected of them. Instead, abstinence and faithfulness to one partner are a must and are perceived as sufficient to prevent STIs. Possibly for the same reason, only 7% of other Christians in Zimbabwe are circumcised (ZIMSTAT & ICFI, 2012). In spite of this perception from a health perspective, the practice of circumcision among Christians in other places is quite common, influenced by other motives. According to the demographic and health survey, 96% of Orthodox Christian men in Ethiopia are circumcised (ECSA & ICFI, 2012). An MC acceptability study by Ngalande *et al.*, (2006) showed that participants perceived circumcision as

a necessary practice among Christians since Jesus Christ himself was circumcised and the Bible teaches it.

While results of this study show that Swazi men, who are mostly Christians, perceives circumcision for STI prevention as unnecessary because they adhere to Christian values of abstinence and faithfulness to one partner, evidence informs that over 15% of them are involved in sex with more than one partner, and low individual behaviour change among the population is still critical (Swaziland, 2012). Thus, Swazi men portray a wide range of sexual behaviours, leading to variations in their perception of the protective effect of circumcision against STIs.

This study showed that participants who perceived circumcision as necessary were mainly those who often indulge in risky sexual behaviour. These participants thought circumcision will be the solution to their STIs and it will give them total protection from STIs as they continue their promiscuity. This finding confirms some earlier media reports (News24, 2008; Circumcision campaign clouding HIV issues, 2011) that Swazis have a misconception that circumcision offers 100% protection against STIs and that once one circumcised there is no need for using a condom when having sex. To this end, circumcision has been perceived as perpetuating the indulgence in risk sexual behaviour among Swazis, thereby being counterproductive from a public health perspective. It must be noted, however, that with or without misconceptions, circumcision or nor, a significant proportion of Swazi men indulge in risky sexual behaviour (Swaziland, 2012).

Amid these misconceptions though, results also show that some Swazi men's perceptions of circumcision is in direct alignment with the views of the promoters of the procedure for public health. Thus, circumcision is viewed as a partially protective measure which is meant to complement, and not to substitute, the primary behavioural preventive measures, which are abstinence, faithfulness to one partner as well as correct and consistent use of condoms (WHO, 2007b). These perceptions are apparently influenced primarily by the ongoing national mass circumcision campaigns. The individuals' level of understanding and appreciation of the messages from the campaigns is enhanced by prior knowledge of biological sciences from their formal education. While this study revealed a mixture of feelings and perceptions about circumcision, the proportions of the various perceptions among the Swazi adult male population could not be ascertained. A further quantitative study would be necessary to establish these proportions. Meanwhile, however, based on the trend of low uptake of circumcision described in the background section, it can safely be concluded that the proportion of those who hold a positive perception about circumcision is generally small. Moreover, since the onset of the campaigns, the MC scale up process successfully ensured efficient and effective MC service delivery, with no technical and infrastructural barriers whatsoever (Nqeketo, 2010; Adams, 2012). According to the health belief model, this leaves individuals' perceptions of the effectiveness and benefits of MC as the major determinant to its uptake (Witte, 2007).

Even though it is felt that the numbers of people who are coming for circumcision are too few and below the target, they are the high risk group. Majority of those who are not turning up for the procedure are those who are least likely to engage in risky sexual behaviour. Thus, the low uptake of mass MC for the prevention of HIV may not necessarily depict failure of the strategy, as what some reporters perceive it (News24, 2008; Circumcision campaign clouding HIV issues, 2011), but rather a natural selection of the most relevant and at-risk portion population. Based on the results of this study, it must be acknowledged that the country's initial target of eventually circumcising 80% of all men aged 15-24 years in five-years' time (MoH, 2009) was somehow too optimistic, given the various perceptions among the population, some of which appear difficult to change, if at all necessary to change them.

In any case, some of the identified negative perceptions about MC can potentially be positively influenced with continued campaigns. It is therefore, recommended that efforts be continued, through the implementation of the National Male Circumcision Policy, to convince more of the Swazi population about the protective effect of circumcision and to clarify

misconceptions. It is also recommended that more emphasis be placed on prevention of other sexually transmitted infections in the mass MC campaigns since this has been proven to be a more convincing reason for motive for undergoing MC than the primary reason behind the campaign, which is HIV prevention. In addition, integration of the concept of circumcision for the prevention of STIs into formal education and/or school curricular may also facilitate the process, since it has been shown that formal education enhances individual understanding of the scientific bases of the mechanism of action of the procedure.

The results of this study, however, needs to be interpreted within the context of the limitations that the study was conducted on a small sample, which may not be sufficient to represent all Swazi men even though it was determined by data saturation. Moreover, only one study site was used, which also does not adequately represent the whole country even though the sight was strategically chosen so as to capture participants from all over the country. The study also elicited only men's perceptions when evidence informs that women are also relevant and influential stakeholders in the uptake of male circumcision.

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