

# **The influence of social constructs of hegemonic masculinity and sexual behaviour on acceptability of vaginal microbicides in Zambia**

Oliver Mweemba<sup>a</sup>, Rachael Dixey<sup>b</sup>, Virginia Bond<sup>cd</sup>, and Alan White<sup>e</sup>

<sup>a</sup>Department of Public Health, University of Zambia, Lusaka, Zambia; <sup>b</sup>Centre for Health Promotion Research, Leeds Beckett University, Leeds, UK; <sup>c</sup>Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, UK; <sup>d</sup>ZAMBART Project, University of Zambia, Lusaka, Zambia<sup>e</sup>Centre for Men's Health, Leeds Beckett University, Leeds, UK

Corresponding author details

Dr Oliver Mweemba

Email: [mweemba2@yahoo.com](mailto:mweemba2@yahoo.com)

Postal address

Department of Public Health

University of Zambia

School of Medicine

PO Box 50110

Lusaka, Zambia

## **Abstract**

Vaginal microbicides are heralded as a woman's HIV prevention method. This ethnographic study, conducted in a rural setting in Zambia, explored how the social construction of masculinity and sexual behaviour influenced the acceptability of vaginal microbicides from the man's perspective. The data was generated from 18 In-depth Interviews (IDIs), and 8 Focus Group Discussions (FGDs). The data was analysed thematically. The study found that hegemonic masculinity influenced the use of gel use among women in multiple ways: decision to initiate gel use, autonomous use of the gel and consistent use of the gel. Men were seen as heads of households and decision makers who approved their partners' intentions to initiate gel use. Autonomous gel use by women was not supported because it challenged men's position in sexual matters and at family level. The socially accepted notion that men engaged in multiple sexual relationships also influenced women's decision to use the gel. Sustained gel use depended on the perceived effect of the gel on men's sexual desires, sexual performance, fertility, and sexual behaviour. This study suggests that acceptability of microbicides partially lies within the realm of men, with use constrained and dictated by cultural constructs and practice of masculinity and gender.

**Key words:** Masculinity, Microbicides acceptability, Sexual behaviour, HIV prevention, Zambia

## **Introduction**

Vaginal microbicides remain a priority HIV prevention option for women who can't access the 'current' HIV prevention strategies, such as condoms (Heise & Elias, 1995; Karim, Baxter, & Karim, 2013). Microbicides are formulated in many ways, including gel, film and ring form (Baeten et al., 2016; Shattock & Rosenberg, 2012). This research paper draws on participants who used the gel in the Microbicides Development Program (MDP) clinical trial. A single dose 2ml gel was applied topically one hour before sex using a prefilled applicator (McCormack et al., 2010).

So far, only two products have shown significant results in preventing HIV (Abdool Karim et al., 2010; Baeten et al., 2016; Nel et al., 2016). The first is the CAPRISA 004 Phase IIb study, which showed that Tenofovir reduced HIV by 39% (Abdool Karim et al., 2010). This result could not be replicated in a phase III trial (Rees et al., 2015). Recently, two studies of Dapivirine, administered using a monthly vaginal ring, showed effectiveness against HIV-1 among women, in phase III trials conducted in Africa (Baeten et al., 2016; Nel et al., 2016).

While questions remain on why some vaginal microbicides have not shown effectiveness in phase III trials (Marrazzo et al., 2015; McCormack et al., 2010; Rees et al., 2015), it is known that there has been less consistent use of the gel in some trials (Marrazzo et al., 2015; Mayer, 2015). Several studies have debated the factors that influence consistent use and generally acceptability of vaginal microbicides (Coly & Gorbach, 2008; Doggett et al., 2015; Domanska & Teitelman, 2012; Mantell et al., 2005; C. Woodsong et al., 2013). One prominent issue from these studies is the role male partners play in the use of vaginal microbicide (Doggett et al., 2015; Jones, Weiss, Chitalu, Bwalya, & Villar, 2008; Koo, Woodsong, Dalberth, Viswanathan, & Simons-Rudolph, 2005; Lanham et al., 2014; C. M. Montgomery et al., 2010; C. M.

Montgomery et al., 2008; Moon, Khumalo-Sakutukwa, Heiman, Mbizvo, & Padian, 2002; Venables & Stadler, 2012; C. Woodsong & Alleman, 2008; Cynthia Woodsong & Holt, 2015; C. Woodsong et al., 2013). Questions on why and how male partners have influence in microbicides acceptability have not been fully explored in the context of social constructs and practices of masculinity and gender (Coly & Gorbach, 2008; Domanska & Teitelman, 2012; Mantell et al., 2005). Some studies that have attempted to do so have limited their analysis to the level of the couple and in the context of sexual relationships, rather than the broader social norms on sexuality, hegemonic masculinity and gender (Kelly et al., 2015; Lanham et al., 2014; C. M. Montgomery et al., 2010; C. M. Montgomery et al., 2008; C. Woodsong et al., 2013). This study explores the influence of the social construction of hegemonic masculinity and sexual behaviour on the acceptability of vaginal microbicides. In this study, acceptability refers to the ability for a woman or couple to use a microbicide gel in a correct and consistent manner or supporting and facilitating an environment conducive for microbicide use (Coly & Gorbach, 2008; Cynthia Woodsong & Holt, 2015).

### **Hegemonic masculinity**

Hegemonic masculinity refers to the dominant form of male behaviour and becomes a basis against which other masculinities are measured (Connell & Messerschmidt, 2005). Hegemonic masculinity define men's expected way of performing their male role in a particular society and individuals strive to live according to its dictates. These expected behaviours are defined by interrelated social contexts at community, family and couple levels (Connell & Messerschmidt, 2005) . For example, in the African context, men are expected to marry, have children, and assume the role of household heads and breadwinner for the family (Hendricks, Swartz, & Bhana, 2010; Heslop & Banda, 2013; Simpson, 2009; Snow, Winter, & Harlow, 2013). Men are

expected to be in charge of sexual relationships and initiate, engage in sex with multiple partners and sexually satisfy them (Bhana, Morrell, Hearn, & Moletsane, 2007; Brown, Sorrell, & Raffaelli, 2005; Heslop & Banda, 2013; Simpson, 2009).

Hegemonic masculinity is also dynamic and continuously challenged by alternative masculinities, gender discourses and changing socio-economic conditions (Connell & Messerschmidt, 2005; Dworkin, Hatcher, Colvin, & Peacock, 2013; Hunter, 2005; Silberschmidt, 2005; Slegh, Barker, Kimonyo, Ndolimana, & Bannerman, 2013). Slegh et al. (2013) reports how men in Rwanda were more involved in domestic work and caring of children; and reduced gender-based violence, following a gender transformative program by PROMUNDO and Care Rwanda.

Hegemonic masculinity has a complex relationship with HIV risk and prevention. Living up to dictates of hegemonic masculine lead some men to engage in high HIV risk behaviour such as multiple sexual partners and sexual violence, hence, increasing HIV risk to women as well (Chimbiri, 2007; Hunter, 2005; Simpson, 2009; Skovdal et al., 2011; Smith, 2007). Living to the dictates of hegemonic masculinity has also prevented some men from seeking and using HIV services such as Voluntary Counselling and Testing (VCT), condoms, and antiretroviral Therapy (ART) (Brown et al., 2005; Chimbiri, 2007; Skovdal et al., 2011). This puts women at risk too. For example, Chimbiri (2007) found that condom use was low in marriage because it was seen to interfere with the core of marriage and hegemonic masculinity ideals such as sexual satisfaction and procreation.

In contrast, HIV risk behaviours such as gender-based violence and multiple sexual relations is associated with frustrations of failing to fulfil hegemonic masculinity due to modern gender dynamics and social challenges such as poverty and unemployment (Baker & Ricardo,

2005; Brown et al., 2005; Jewkes & Morrell, 2010; Lesch & Bremridge, 2006). Brown et al. (2005) explicitly showed that men who failed to achieve hegemonic masculinity, in the context of changing gender roles, resorted to alternative, and high HIV risk related, behaviour such as multiple sexual partners, alcoholism, unprotected sex, and fathering many children.

The complex relationship hegemonic masculinity has with HIV risk and prevention provides a useful theoretical lens for this paper. In this study, we explore how social constructs and practices of hegemonic masculinity at community, family, couple, and individual levels shaped and influenced microbicides gel use.

## **Methodology**

### ***The social context of the study***

The study was conducted in Mazabuka, one of the six sites of the MDP phase III trial testing the candidate microbicides PRO2000. The Mazabuka site enrolled about 1340 sexually active women, to be followed-up for 52 weeks. The MDP study also offered the male partners STI services including HIV testing (McCormack et al., 2010). Despite having explored the role of male partners in women's use of the gel in the social science component of the study, the MDP study did not specifically explore gel use through the lens of hegemonic masculinity. In 2009, the first author conducted an ethnographic study for his PhD, separate from the MDP trial, to explore how the social constructs and practices of hegemonic masculinity influenced the acceptability of vaginal microbicides, in the four communities where the MDP study recruited over three quarters of its participants. The analysis for this paper is limited to the data collected in IDIs and FGDs in the first six months of fieldwork (see the attached interview and FGD guides).

### *Data collection*

The data collection commenced after getting ethical approval from the University of Zambia Biomedical Research Ethics Committee and Leeds Beckett University ethical review board. Gatekeepers were informed about the purpose of the study and all participants in interviews and groups discussions provided written consent.

The data included in this paper was generated through FGDs and IDIs. The methods were implemented sequentially and concurrently to better understand the contextual and specific information from participants on masculinity and acceptability of vaginal microbicides. For example, the first FGDs were designed to provide general information on social and sexual roles and behaviours as well as general acceptability about microbicides. The IDIs were designed to provide specific information on the practice of gender and masculinity at family and couple level in the context of gel use. Figure 1 further shows the implementation of these methods in period of 6 months. [Insert figure 1]

### *Focus Group Discussions*

Eight FGDs (four with women, four with men) were conducted. The participants were selected from four communities where the MDP study had recruited most of the trial participants. Of the four FGDs with women, two were with women using the gel (separate from those who participated in IDIs). The composition of the participants in each FGDs was homogenous in

gender, age and socio-economic status. Table 1 shows participant details for all the 8 FGDs.

[Insert Table 1]

FGD participants were purposely recruited with the help of community health workers and MDP staff. The participants were 18 years and above and had lived in the community for at least one year. An experienced researcher (the first author) moderated the FGDs while an experienced research assistant wrote notes. The topics discussed in the FGDs included men and women's expected social and sexual roles and behaviours; community knowledge on HIV, HIV risk, HIV prevention strategies, and general acceptability of vaginal microbicides.

### *In-Depth Interviews*

Eighteen IDIs were conducted; six with women who used the gel; six men whose partners used the gel; six with key informants. Table 2 shows selected information on each category of participants. [Insert Table 2]

Of the six women gel users, three had faced partner opposition to use the gel; three had received partner support to use the gel. Four of the six men supported their partners' use of the gel throughout the trial while the other two men's partners stopped using the gel in the course of the trial. Three of the key informants were community leaders; three were MDP community workers.

Men and women participants were purposely selected based on their knowledge and experiences with gel use. Key informants were purposely selected based on their insights on

community norms and their experiences in implementing the MDP study. All interview participants were recruited to participate in this study through the community structures involved in the implementation of the MDP study. The first author conducted all interviews, with assistance from a female health worker (when interviewing women). The interview topics included motivation to participate in microbicides research and use the gel, their experience with using the gel, and partner support in gel use. The key informants also provided insights on the implementation of the MDP study in the context of social norms.

### *Data management and analysis*

All FGDs and IDIs were recorded, transcribed, and translated verbatim. The data were analysed thematically. Themes and codes were generated during fieldwork and evolved as more information emerged, leading to the development of a comprehensive thematic framework. The thematic framework reflected the hegemonic forms of masculinity emerging from the data (Connell & Messerschmidt, 2005). The themes were validated by co-authors who separately analysed the documents. Themes and codes were also analysed for varying and similar perspectives across and within data sources. The final analysis explored the patterns of meanings and relationships between social constructs and practices of hegemonic masculinity and acceptability of vaginal microbicides.

### **Results**

The study explored how social constructs and practices of hegemonic masculinity influenced the acceptability of vaginal microbicides in a clinical trial context. This study shows that men's social roles as heads of households, being a father; their sexual roles and identities; their

engaging in multiple sexual relationships; and a focus on their strong sexual desires and performance, had a significant influence on the acceptability of gel use. These constructs and practices of hegemonic masculinity influenced the use of vaginal microbicides positively or negatively, in multiple ways including: the decision to initiate gel use, a woman's autonomous use of the gel and consistent use of the gel.

### ***Head of the house and gel use***

This study found that men's expected role as heads of households, cast them as the ultimate decision maker, which influenced the initiation of gel use as well as a women's ability to use the gel autonomously. The women who participated in both FGDs and IDIs were aware that they should inform their male partners and seek permission from them because men were heads of households. In an IDI, a 40-year old woman argued:

According to our custom, anything that you want to do as a woman, you are supposed to ask your husband first...we [women] are supposed to ask for permission from the partner to use the gel...you are supposed to ask for permission from the man, he needs to authorise because he is the head.

This influence is entrenched in social constructs of hegemonic masculinity where men, as heads of the household, are expected to lead all decision making processes, with women playing a supportive role. This perspective emerged from all FGDs where participants argued that *"a man being the head of the household makes all decisions. The role of a woman is to help and support a man's programs."* (Married woman in her late 20s, with children).

The same reasons attributed to men's authority as the head of the house also affected women ability to use the gel autonomously. This study found that there was a general disapproval of autonomous use of the gel from men, women and community leaders. For example, a single man in his mid-20s in an FGD argued:

The man is the one in charge... he is the head of the house, so he is supposed to monitor the using of the gel. If she is my wife, I will be personally in control [of the gel] ... the husband should know how the gel is moving [used]. I think it is better than a woman being in control, and use without the knowledge of the partner.

Some gel user confirmed that some men regulated and monitored their partners' use. Some men were counting and taking note of the number of used and unused applicators to make sure that none is missing. Here is a FGD conversation with married women (gel users) in their 20s:

Moderator: Have there been any concerns about using gel from your partners?

Respondent 6: They used to say that it would bring prostitution

Respondent 3: Some were even counting

Respondent 4: To make sure that it is only him you are using it with

This study also found that women who used the gel without their partner's knowledge were hiding the gel, or kept it with relatives or friends for they feared violence from their partners if they were discovered.

Interviewer: So you said, at first, you did not tell him [partner] about the study.

Respondent: No I did not tell him, I just went [to the clinic] because I was fearing that if I tell him, he will stop me. But later, I tried to tell him [ask for permission] but he refused, however I went ahead because I wanted to know my [HIV] status.

Interviewer: But how did you bring it in the house?

Respondent: I had to hide it...I dug a hole in the ground, outside in the garden

Interviewer: So how was it possible to use it when it was time to use?

Respondent: Behind the house [where the gel was hidden] is where the garden is, so I would pretend as if I have gone to the garden, and then I would get one applicator

Interviewer: Now if you were getting only one [applicator] but he wants more sex again, say two [rounds], how were you dealing with that?

Respondent: That is how he discovered. I wanted to get another applicator and he secretly followed me behind the house and caught me red handed with them... He did not beat me but got annoyed and told me to stop using the stuff immediately. That is how I stopped.

Some women in similar situations were reported to withdrawal from the trial and stopped using the gel because they feared divorce. A key informant from the MDP study confirmed such cases.

We had a number who exited the study early. They said their partner did not want to continue using the gel. They said they cannot risk their marriage so would just stop and they actually stopped.

Some women who tried to use the gel without informing their partners were reported to have suffered violence from their partners. One community key informant provided some insight on this:

One woman was beaten...she was on the trial and after getting the gel, she was using the gel secretly and the husband discovered; she was beaten...he accused her of using the gel with another man.

### ***Fatherhood and gel use***

Fatherhood is one of the areas men in the study expressed and demonstrated their hegemonic masculinity. The expectation that the men would become a father was common in this study as it emerged from almost all FGDs and IDIs. This expectation was well articulated by a female FGD participant.

When a man marries, the people would start counting days. If they see that 2 to 3 months have passed without [pregnancy], they will say that he is not a man. If they see the wife is vomiting, [pregnant] they will say, “Yes, he is a man, he has worked” (Married women in her early 50s, with children).

A married community key informant with children also noted that a marriage without children can end in divorce: *“failure to have children causes a man and sometimes a woman to leave [divorce] their home since they would be of no use to each other.”*

This fear that the gel could stop the women conceiving was a strong influencing factor in their decision to use the gel. Married women in their early 30s, with children narrated in an FGD:

Moderator: What will make the gel acceptable?

Respondent 1: If the gel will be perceived to have an effect on bearing children, it will definitely bring ‘problems’ from our partners

Moderator: Why do you say so?

Respondent 10: All they want is that we should always give birth

Respondent 4: When you stop bearing children, they would say that ‘she has become a prostitute’, you can be beaten or divorced

Most men echoed the view above. They felt that the gel had advantages over condoms because it allowed direct sexual contact, not interfering with conception whilst at the same time promising to protect against HIV. A married man in his mid-30’s, with four children, who supported his partner to use the gel expressed relief:

This thing [gel] is very good because you are able to have children, not condoms because the sperms [semen] will remain there [in the condom] but this [gel], it is direct and the sperms will enter inside.

The sentiments suggest that parenthood and in particular, fatherhood is a treasured social status, which is highly considered when individuals make decisions on what prevention options to adopt.

### ***Multiple sexual relationships and gel use***

The other hegemonic masculinity construct which influenced the initiation of gel use was the social acceptability of men's engagement in multiple sexual relationships. Participants in both IDIs and FGDs linked the social acceptability of men's multiple sexual relationship to their status of being the head of the household. A married man in his late 20s, with two children explained in an FGD.

Men do that [engaging in multiple sexual partners] because they are the heads of the household. That is why they goes on having sex with different women. If a wife tries to complain, he would challenge her that, "I already married you, so there is nothing that you can tell me".

Because of this proclivity, some women were motivated to start using the gel because they perceived themselves to be at risk of HIV from their partners. A 50-year-old female key informant reported:

Women know that most men tend to have multiple sexual partners outside marriage. So, they are scared that man's promiscuous behaviour would put them at risk of HIV. They hope that the gel, despite being on trial, would protect them from HIV infection.

Some women were motivated to use the gel consistently because it became a means of keeping their husbands to themselves due to its ability to increase sexual pleasure (which is discussed further below). A key informant who worked closely with participants in the MDP trial reported:

You know, the gel was reported to be warming the inner part of the vagina. It changed things. It made them [Husbands] have sex everyday with their wives because they were now enjoying it. This made husbands to become faithful because they became used to enjoying sex at home.

Some women who no longer used the gel because they had finished their follow-up on the trial were even worried that their partners would go back to their 'old' ways of having multiple sexual partners. A key informant from the MDP study indicated that most women expressed this view when coming for their final visit in the study.

...as they, [study participants] were clocking their week 52 [final study visit], they would be sad that they would no longer be able to use the gel. They would ask if they could be allowed to continue using the gel because 'my marriage relationship is now good. This [gel] enhanced our bond [marriage]. The sexual enjoyment had really improved...and now if it goes, they [men] will go back to other women'

Overall, this theme shows suggests that the social acceptability of men engaging with multiple sexual partners was integral to some women's decisions to use the microbicide gel.

### *Strong sexual desire and performance, and gel use*

The social constructs that men were expected to have strong sexual desires and strong sexual performance emerged in this study as part of their demonstration of hegemonic masculinity. Men's strong sexual desires were linked to the penis, hence, men are perceived to like sex more than women.

Men's sexual desires are very strong...like that of a lion. Sometimes you find that even when you are just talking to a lady, you are greeting each other, you find that it (penis) is up already, the animal (penis) is up because of strong sexual desires (Single man in his early 20s – FGD participant).

The belief in this notion that men have strong sexual desires affected not only the general use of the gel but also its consistent use. This was reflected in IDIs with both men and women who used the gel in their sexual relationships. One man (late 30s) whose partner used the gel reported that there were times when his partner had no chance to apply gel because he was too 'pressed' and wanted sex immediately.

It used to happen [not using the gel], when you have not planned [to have sex] ... It happens without her inserting the gel. My body [sexual desires] could not wait. She would say, 'wait, first I insert [gel]', but too late, 'you are already high [feeling sex]'; you just tell her to forget about it.

Some women who used the gel also confirmed some situations where the gel was not used because men unexpectedly demanded sex:

There are times when he would want sex immediately. We would have sex without using the gel...it just happens...and we would do [have sex] without it

[gel] (Woman in her early 40s).

Also linked to strong sexual desires was sexual performance which depended on a fully functional penis. The importance of a functioning penis was emphasised by both men and women in FGDs it was singled out as the basis for sexual performance.

If a man does not perform sexually because he can't have an erection, the woman would be 'stranded' and that means she cannot have a happy marriage and family. [A man] needs to have a functioning penis with a strong erection; even if he does not buy any food at all, it will not bother her at all. She would be very happy and would stay [in marriage] (Unemployed married man in his early 40s).

With this context, some men in this study found excessive wetness during sex undesirable because it affected the erection of the penis. A 30- year old man explicitly expressed this concern.

We are told that the gel is about 4ml and as you know, women have a natural water discharge from the vagina. Since a woman is already wet and again she uses this gel, the man's machine [penis] will be sleeping [losing erection] because that lubrication watery has disturbed it...the machine [penis] machine does not want 'water' [over lubrication].

This concern above about over lubrication, though not based on factual information on the volume of the gel in the MDP study applicator which was 2ml as opposed to 4 ml, seemed to affect gel use. Some women were reported to stop using the gel when their partners complained of excessive wetness during sex. This study revealed that these women were worried about

rejection or divorce if their partners perceived them to be excessively wet. One of the gel users (Married woman in her early 20s) who participated in the FGD contributed that some women *‘instead of using it [gel], they used to squeeze on the ground. They used to say that it causes wetness, and a woman knows that if she is too wet she can be divorced and he marries someone else who is not too wet.* This definitely affected the optimal use of the gel. The squeezing out of the gel on the ground also shows how women ‘negotiated’ the demands of participating in the trial where they were required to take back both used and unused applicators for gel use accountability.

On the other hand, some men found the gel useful in strengthening their sexual desires and performance, helping them to satisfy their partners sexually. A married man in his mid-30s narrated in an interview how the gel enabled him to have a better sexual performance.

It gave me a lot of [sexual] appetite and just how it feels; the tenderness was good. I could even manage two rounds [of sex] not just one. It is even better than ‘African’ herbs, which some people use.

Some women confirmed that some men wanted more sex and some men were demanding the use of the gel during sex.

He wanted more sex; he used to enjoy sex with the gel. That is why he used to remind me that, ‘you are not inserting today those things [gel]. I enjoy them’ (Married woman in her early 20s - IDI).

This perceived increased sexual performance by some men attributed to the gel was in conformity with the masculine expectation, which also emerged in both IDIs and FGDs, that a man was expected to satisfy his partner sexually.

A man is supposed to satisfy her, not where she remains longing for it [sex]. If not, she will end up finding someone else to give her sex. A real man should make sure that when you have sex, things work out [satisfy the partner] (Married woman in her early 30s –FGD).

This sentiment shows that the use of the gel, including its consistent use, is affected by the sexual roles and identities of men and women, with men's interests dominating.

## **Discussion**

This study has demonstrated that the complex social constructs associated with hegemonic masculinity and the associated sexual behaviours shape women, couples and community's acceptability of vagina microbicides. The same constructs of masculinity seemed to produce both positive and negative influences on decisions to use the gel, decisions to use it autonomously and the ability to use it consistently. This fits with the argument that masculinities are multiple and continuously reconstructed as individuals interact with other people in different contexts, producing shifting and turbulent identities (Connell & Messerschmidt, 2005).

The influence of partners in decisions to use the gel has been reported by other studies (Doggett et al., 2015; Jones et al., 2008; Kelly et al., 2015; Koo et al., 2005; C. M. Montgomery et al., 2008; Moon et al., 2002; Veldhuijzen et al., 2006; Venables & Stadler, 2012; C. Woodsong & Alleman, 2008). However, these studies did not contextualize the influence of male partners to broader social constructs on hegemonic masculinity. For example, the citing of trust, morality, violence and divorce as the reasons married women informed their partners about gel use shows that the relationship between men and women is deeply embedded in social norms and

gender structures, which privileges men. This study explicitly showed that the desire to inform the partner about gel use and concerns on autonomous use were strongly influenced by the social constructs of hegemonic masculinity. This study also provided an important contribution to the study of microbicides acceptability because it shows that consistent gel use goes beyond the individual to include negotiated social constructs of masculinity, gender roles and sexual behaviour. Further, this study showed that because of the increased sexual pleasure associated with gel, which has also been found in other studies (Gafos et al., 2011; C. M. Montgomery et al., 2010), some men increasingly regulated their partners' sexual lives and the use of the gel because of their fear that their partners may use it with other men for sexual pleasure. The findings are consistent to some extent with Gafos et al. (2015)'s study in South Africa in as far as women in long term relationships are concerned. However, Gafos et al. (2015)'s study suggests that young couples reported more autonomous use of gel because they were more likely to be in less established relationships where issues of trust and informing the male partners were less important.

The study therefore joins a study by Catherine M Montgomery (2012) in challenging the assumptions that vaginal microbicides are a 'woman driven' HIV prevention method. To curb women's vulnerability to HIV, vaginal microbicides were initially seen as an essential element in empowering women to be able to protect themselves from HIV (Baeten et al., 2016; Heise & Elias, 1995; Karim et al., 2013). However, this study suggests that women's decisions to use microbicides gel are located within the parameters set by their social relationships with their partners and other members of society as they construct and practice gender in the context of social change. In particular, we have demonstrated that microbicides as an empowerment tool for women is complicated to realise in reality and that the complexity of feminine and masculine

social roles and practices needs to be thoroughly understood in order for women to take control of their exposure to HIV infection. This study suggests that by men getting actively involved in decisions to use the gel, whether it be out of the fear that women can use it with other men, or for their own sexual needs, it became a means for controlling women's sexuality. Even if this study and others (C. M. Montgomery et al., 2010; C. Woodson et al., 2013) suggested that men play a positive role in gel use, this study also suggested that hegemonic masculinity compromise women's ability to make autonomous decisions on gel use. This study showed that some men found an opportunity in gel use to exercise and strengthen their hegemonic masculinity. This undermines the main intention for developing microbicides as an empowerment tool to promote women autonomy in sexual and reproductive health (Heise & Elias, 1995).

This study having been conducted in a microbicides trial context, makes it difficult to claim that the findings and issues raised may apply outside the trial environment such as during a rollout if vaginal microbicides are found effective. The results from this study are also based on a relative smaller population, hence, limiting the transferability of these results to other cultural settings. For example, it was difficult to get information from men who opposed gel use. This makes it harder to gauge how their masculinities compare with men who supported their partners to use the gel. Therefore, microbicide research needs to invest in understanding the complex cultural relations that provide the context of actors in different settings and different groups (Kelly et al., 2015). Future microbicides research (including formulations such as vaginal rings) may still consider understanding how the intersectionality of various dimensions of power relations including gender, socioeconomic status, and culture may influence product use.

The findings from this study strengthen of the findings from previous studies, which have shown how hegemonic masculinity affected HIV prevention and uptake of sexual health services

(Baker & Ricardo, 2005; Brown et al., 2005; Jewkes & Morrell, 2010; Skovdal et al., 2011). Our study adds to the consensus that women's vulnerability to HIV is not only biological but is sustained by gender inequalities, which also complicates the introduction of HIV interventions for long-term sexual relationships (Bhana et al., 2007; Chimbiri, 2007; Smith, 2007). It also supports the argument on the need to understand and challenge the deeper and complex gender and masculine roles by engaging men and women in alternative gender identities (Dworkin et al., 2013; Kelly et al., 2015).

Finally, though the results from this study may not be directly relevant to oral Pre-Exposure Prophylaxis (PrEP) roll-out; the fact that this study and others show that individuals, couples, and communities contextualize their decisions and experiences of HIV prevention services to dominant gender regimes such as hegemonic masculinity (Jewkes & Morrell, 2010; Kelly et al., 2015; Lanham et al., 2014; Skovdal et al., 2011), suggests a need to pay close attention on the potential impact of hegemonic masculinity on PrEP roll-out.

### **Acknowledgements**

I want to thank the participants in this study for giving their time. Special thanks go to MDP investigators; Robert Pool, Sheena McCormack, Catherine Montgomery, Seter Siziya, and Maureen Chisembele for a small grant to support this work as well as facilitating access to MDP study sites and participants. I also thank the Southern Africa Centre of Research Excellence at School of Medicine of the University of Zambia for additional financial support for this work.

## References

- Abdool Karim, Q., Abdool Karim, S. S., Frohlich, J. A., Grobler, A. C., Baxter, C., Mansoor, L. E., . . . Group, C. T. (2010). Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. *Science*, *329*(5996), 1168-1174. doi:10.1126/science.1193748
- Baeten, J. M., Palanee-Phillips, T., Brown, E. R., Schwartz, K., Soto-Torres, L. E., Govender, V., . . . Team, M.-A. S. (2016). Use of a Vaginal Ring Containing Dapivirine for HIV-1 Prevention in Women. *N Engl J Med*. doi:10.1056/NEJMoa1506110
- Baker, G., & Ricardo, C. (2005). Young Males and Masculinity in Sub-Saharan Africa: HIV/AIDS, Conflict, and Violence. *The World Bank Social Papers*, *26*, 9-14.
- Bhana, D., Morrell, R., Hearn, J., & Moletsane, R. (2007). Power and identity: An introduction to sexualities in Southern Africa. *Sexualities*, *10*(2), 131-139.
- Brown, J., Sorrell, J., & Raffaelli, M. (2005). An exploratory study of constructions of masculinity, sexuality and HIV/AIDS in Namibia, Southern Africa. *Cult Health Sex*, *7*(6), 585-598. doi:10.1080/13691050500250198
- Chimbiri, A. M. (2007). The condom is an 'intruder' in marriage: evidence from rural Malawi. *Soc Sci Med*, *64*(5), 1102-1115. doi:10.1016/j.socscimed.2006.10.012
- Coly, A., & Gorbach, P. M. (2008). Microbicide acceptability research: recent findings and evolution across phases of product development. *Curr Opin HIV AIDS*, *3*(5), 581-586. doi:10.1097/COH.0b013e32830aba00
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic masculinity rethinking the concept. *Gender & society*, *19*(6), 829-859.
- Doggett, E. G., Lanham, M., Wilcher, R., Gafos, M., Karim, Q. A., & Heise, L. (2015). Optimizing HIV prevention for women: a review of evidence from microbicide studies and considerations for gender-sensitive microbicide introduction. *J Int AIDS Soc*, *18*(1).
- Domanska, C. A., & Teitelman, A. M. (2012). Factors that affect acceptance of HIV microbicides among women. *Collegian*, *19*(1), 23-32.
- Dworkin, S. L., Hatcher, A. M., Colvin, C., & Peacock, D. (2013). Impact of a gender-transformative HIV and antiviolence program on gender ideologies and masculinities in two rural, South African communities. *Men and masculinities*, *16*(2), 181-202.
- Gafos, M., Mzimela, M., Ndlovu, H., Mhlongo, N., Hoogland, Y., & Mutemwa, R. (2011). "One teabag is better than four": Participants response to the discontinuation of 2% PRO2000/5 microbicide gel in KwaZulu-Natal, South Africa. *PLoS One*, *6*(1), e14577. doi:10.1371/journal.pone.0014577
- Gafos, M., Pool, R., Mzimela, M. A., Ndlovu, H. B., McCormack, S., Elford, J., & Team, M. D. P. (2015). Communication About Microbicide Use Between Couples in KwaZulu-Natal, South Africa. *AIDS Behav*, *19*(5), 832-846. doi:10.1007/s10461-014-0965-y
- Heise, L. L., & Elias, C. (1995). Transforming aids prevention to meet women's needs: a focus on developing countries. *Soc Sci Med*, *40*(7), 931-943.
- Hendricks, L., Swartz, S., & Bhana, A. (2010). Why young men in South Africa plan to become teenage fathers: Implications for the development of masculinities within contexts of poverty. *Journal of Psychology in Africa*, *20*(4), 527-536.
- Heslop, J., & Banda, R. (2013). Moving beyond the "male perpetrator, female victim" discourse in addressing sex and relationships for HIV prevention: peer research in Eastern Zambia. *Reproductive health matters*, *21*(41), 225-233.

- Hunter, M. (2005). Cultural politics and masculinities: Multiple-partners in historical perspective in KwaZulu-Natal. *Cult Health Sex*, 7(4), 389-403.
- Jewkes, R., & Morrell, R. (2010). Gender and sexuality: emerging perspectives from the heterosexual epidemic in South Africa and implications for HIV risk and prevention. *J Int AIDS Soc*, 13(1), 1.
- Jones, D. L., Weiss, S. M., Chitalu, N., Bwalya, V., & Villar, O. (2008). Acceptability of microbicide surrogates among Zambian women. *Sex Transm Dis*, 35(2), 147-153. doi:10.1097/OLQ.0b013e3181574dbf
- Karim, Q. A., Baxter, C., & Karim, S. A. (2013). Topical Microbicides—What's New? *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 63, S144-S149.
- Kelly, C. A., Friedland, B. A., Morar, N. S., Katzen, L. L., Ramjee, G., Mokgatle, M. M., & Ahmed, K. (2015). To tell or not to tell: male partner engagement in a Phase 3 microbicide efficacy trial in South Africa. *Cult Health Sex*, 17(8), 1004-1020.
- Koo, H. P., Woodsong, C., Dalberth, B. T., Viswanathan, M., & Simons-Rudolph, A. (2005). Context of Acceptability of Topical Microbicides: Sexual Relationships. *J Soc Issues*, 61(1), 67-93. doi:10.1111/j.0022-4537.2005.00394.x
- Lanham, M., Wilcher, R., Montgomery, E. T., Pool, R., Schuler, S., Lenzi, R., & Friedland, B. (2014). Engaging male partners in women's microbicide use: evidence from clinical trials and implications for future research and microbicide introduction. *J Int AIDS Soc*, 17(3 Suppl 2), 19159. doi:10.7448/IAS.17.3.19159
- Lesch, E., & Bremridge, C. (2006). Safe sex and constructions of young male sexuality in one semi-rural Western Cape community. *South African Review of Sociology*, 37(2), 128-142.
- Mantell, J. E., Myer, L., Carballo-Diequez, A., Stein, Z., Ramjee, G., Morar, N. S., & Harrison, P. F. (2005). Microbicide acceptability research: current approaches and future directions. *Soc Sci Med*, 60(2), 319-330. doi:10.1016/j.socscimed.2004.05.011
- Marrazzo, J. M., Ramjee, G., Richardson, B. A., Gomez, K., Mgodini, N., Nair, G., . . . Team, V. S. (2015). Tenofovir-based preexposure prophylaxis for HIV infection among African women. *N Engl J Med*, 372(6), 509-518. doi:10.1056/NEJMoa1402269
- Mayer, K. H. (2015). Antiretroviral chemoprophylaxis: new successes and questions. *The Lancet*.
- McCormack, S., Ramjee, G., Kamali, A., Rees, H., Crook, A. M., Gafos, M., . . . Weber, J. (2010). PRO2000 vaginal gel for prevention of HIV-1 infection (Microbicides Development Programme 301): a phase 3, randomised, double-blind, parallel-group trial. *Lancet*, 376(9749), 1329-1337. doi:10.1016/S0140-6736(10)61086-0
- Montgomery, C. M. (2012). Making prevention public: The co-production of gender and technology in HIV prevention research. *Social Studies of Science*, 42(6), 922-944.
- Montgomery, C. M., Gafos, M., Lees, S., Morar, N. S., Mweemba, O., Ssali, A., . . . Team, M. D. P. (2010). Re-framing microbicide acceptability: findings from the MDP301 trial. *Cult Health Sex*, 12(6), 649-662. doi:10.1080/13691051003736261
- Montgomery, C. M., Lees, S., Stadler, J., Morar, N. S., Ssali, A., Mwanza, B., . . . Pool, R. (2008). The role of partnership dynamics in determining the acceptability of condoms and microbicides. *AIDS Care*, 20(6), 733-740. doi:10.1080/09540120701693974
- Moon, M. W., Khumalo-Sakutukwa, G. N., Heiman, J. E., Mbizvo, M. T., & Padian, N. S. (2002). Vaginal microbicides for HIV/STI prevention in Zimbabwe: what key informants say. *J Transcult Nurs*, 13(1), 19-23.

- Nel, A., van Niekerk, N., Kapiga, S., Bekker, L. G., Gama, C., Gill, K., . . . Rosenberg, Z. (2016). Safety and Efficacy of a Dapivirine Vaginal Ring for HIV Prevention in Women. *N Engl J Med*, 375(22), 2133-2143. doi:10.1056/NEJMoal602046
- Rees, H., Delany-Moretlwe, S., Baron, D., Lombard, C., Gray, G., Myer, L., . . . Doncel, G. (2015). *FACTS 001 Phase III trial of pericoital tenofovir 1% gel for HIV prevention in women*. Paper presented at the Conference on Retroviruses and Opportunistic Infections (CROI).
- Shattock, R. J., & Rosenberg, Z. (2012). Microbicides: topical prevention against HIV. *Cold Spring Harb Perspect Med*, 2(2), a007385. doi:10.1101/cshperspect.a007385
- Silberschmidt, M. (2005). Poverty, male disempowerment, and male sexuality: rethinking men and masculinities in rural and urban East Africa *African masculinities* (pp. 189-203): Springer.
- Simpson, A. (2009). *Boys to Men in the Shadow of AIDS: Masculinities and HIV Risk in Zambia*: Springer.
- Skovdal, M., Campbell, C., Madanhire, C., Mupambireyi, Z., Nyamukapa, C., & Gregson, S. (2011). Masculinity as a barrier to men's use of HIV services in Zimbabwe. *Global Health*, 7, 13. doi:10.1186/1744-8603-7-13
- Slegh, H., Barker, G., Kimonyo, A., Ndolimana, P., & Bannerman, M. (2013). 'I can do women's work': reflections on engaging men as allies in women's economic empowerment in Rwanda. *Gender & Development*, 21(1), 15-30.
- Smith, D. J. (2007). Modern marriage, men's extramarital sex, and HIV risk in southeastern Nigeria. *Am J Public Health*, 97(6), 997-1005. doi:10.2105/AJPH.2006.088583
- Snow, R. C., Winter, R. A., & Harlow, S. D. (2013). Gender attitudes and fertility aspirations among young men in five high fertility East African countries. *Studies in family planning*, 44(1), 1-24.
- Veldhuijzen, N., Nyinawabega, J., Umulisa, M., Kankindi, B., Geubbels, E., Basinga, P., . . . Van De Wijgert, J. (2006). Preparing for microbicide trials in Rwanda: focus group discussions with Rwandan women and men. *Cult Health Sex*, 8(5), 395-406.
- Venables, E., & Stadler, J. (2012). 'The study has taught me to be supportive of her': empowering women and involving men in microbicide research. *Cult Health Sex*, 14(2), 181-194.
- Woodsong, C., & Alleman, P. (2008). Sexual pleasure, gender power and microbicide acceptability in Zimbabwe and Malawi. *AIDS Educ Prev*, 20(2), 171-187. doi:10.1521/aeap.2008.20.2.171
- Woodsong, C., & Holt, J. D. (2015). Acceptability and preferences for vaginal dosage forms intended for prevention of HIV or HIV and pregnancy. *Advanced drug delivery reviews*, 92, 146-154.
- Woodsong, C., MacQueen, K., Amico, K. R., Friedland, B., Gafos, M., Mansoor, L., . . . McCormack, S. (2013). Microbicide clinical trial adherence: insights for introduction. *J Int AIDS Soc*, 16, 18505. doi:10.7448/IAS.16.1.18505