

Perceptions of acceptability and utility of microbicides in Ghana, West Africa: A qualitative, exploratory study

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Abstract

Vaginal microbicides, substances that may substantially decrease transmission of sexually transmitted infections (STI) including human immunodeficiency virus (HIV), are currently in clinical trials. They are being presented as woman-initiated prevention methods that have the potential to be used without partners' knowledge. However, it is recognised that covert use may be challenging, due to the accompanying increase in vaginal lubrication. This study explored factors that may influence acceptability and utilisation of vaginal microbicides in Ghana, a sub-Saharan West African country with relatively low rates of HIV.

Qualitative research methods were employed in Accra, Ghana in 2005. Individual interviews were conducted with 10 staff working in reproductive health settings, and two focus groups were conducted with young women aged 24-28. Three main topics emerged during the interviews and focus groups, including issues related to available contraceptive and prevention methods, perceptions of microbicide interest and acceptability, and cultural influences on microbicide acceptability and use. Participants discussed issues associated with available contraceptive options that may influence microbicide uptake. All respondents suggested that Ghanaian women would have a high level of interest in microbicides, with varying interest in formulas with different contraceptive and disease prevention properties. Cultural factors that may impact on microbicide use, often related to gender and power issues, were also discussed. Thus, as microbicides are being developed, cultural issues and behavioral correlates will need to be assessed to help ensure acceptability and use. In addition, gendered negotiation power and the implications of covert use need to be addressed in microbicide education and social marketing.

Keywords: Microbicides, STI/HIV prevention, reproductive health professionals, Ghana, West Africa, gender.

Résumé

Les microbicides vaginaux, une substance qui pourrait largement réduire les infections sexuellement transmises (IST) et le VIH inclus, font actuellement parti des essais cliniques. On prétend que les microbicides sont une méthode de prévention initiée par les femmes elles-mêmes qu'on peut utiliser sans la connaissance du partenaire sexuel. Cependant, on reconnaît que l'utilisation secrète de cette substance peut être un défi difficile à surmonter étant donné la lubrification vaginale exagérée (Global Campaign for Microbicides GCM, 2007). Cette étude examine les facteurs qui peuvent influencer l'admissibilité et l'usage des microbicides vaginaux au Ghana, un pays sous-saharien de l'Afrique de l'Ouest ayant un taux assez bas de VIH. (UNAIDS, 2005).

Des méthodes de recherche qualitative ont été utilisées à Accra, Ghana pendant le mois de mai jusqu'en juillet 2005. Des entretiens individuels ont été menés auprès de 10 personnes qui travaillent en milieu de santé de la reproduction qui par la suite pourraient devenir de partenaires importants de la promotion des microbicides. En plus de cela, deux groupes de foyer ont été menés auprès des jeunes femmes âgées de 24 à 28 ans. Trois sujets principaux ont émergé pendant les entretiens et les groupes de foyer - les sujets liés aux méthodes de contraception et de prévention disponibles, les perceptions de l'intérêt aux microbicides et leur admissibilité et des influences culturelles sur l'admissibilité et l'usage de microbicides. Toutes les participantes ont suggéré que les femmes ghanéennes seront plus intéressées aux microbicides avec un intérêt varié vis-à-vis les formules ayant des propriétés différentes de contraception et de prévention de maladies. Des facteurs culturels, souvent associés aux sexes et au pouvoir, qui pourraient avoir l'impact sur l'usage des microbicides ont été discutés. Bien qu'il y ait eu un grand intérêt aux microbicides qui font la une, il y a de nombreux facteurs qui pourraient avoir l'impact sur l'usage. De ce fait, pendant que les microbicides sont aménagés, les questions culturelles et les corrélats comportementaux doivent être évalués afin d'assurer l'admissibilité et l'usage. De plus, on doit aborder le pouvoir de négociation entre les sexes et les implications de l'usage secret lors de l'éducation portant sur les microbicides et le marketing social.

Mots clés: Microbicides, prévention de IST/VIH, professionnels de santé de la reproduction, Ghana, Afrique de l'Ouest, les sexes.

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Introduction

Globally, human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) affect millions of people. According to estimates from the UNAIDS Report of the Global AIDS Epidemic (2004), 37.2 million adults and 2.2 million children are currently living with HIV. The overwhelming majority of people with HIV, nearly 95% of the global total, live in the developing world (UNAIDS, 2004). This trend is likely to continue in countries where inadequate health care system infrastructures, poverty, and limited resources for prevention and care encourage the spread of the virus (UNAIDS, 2004). On the African continent, the disease has reached epidemic proportions, and sub-Saharan Africa is by far the most devastated area. HIV prevalence varies considerably across the continent - ranging from less than 1% in Egypt and 3.1% in Ghana to 6.7% in Kenya and 21.5% in South Africa (UNAIDS, 2005). Unlike women in other regions in the world, African women are considerably more likely to be infected with HIV than men, as it is estimated that over half of the people living with HIV and AIDS in sub-Saharan Africa are women (Global Campaign for Microbicides, 2004).

The rapid spread of HIV in the female population underscores the necessity for developing new preventive technologies that offer protection from this disease as well as other sexually transmitted infections (STI). This urgency has led to an intense focus on the development of vaginal microbicides. Microbicides are substances that may substantially reduce transmission of STI and pregnancy, although not all microbicides will be contraceptive (Harrison, Rosenberg, & Bowcut, 2003), when applied either in the vagina or rectum. Microbicides can be produced in many forms, including: gels, creams, suppositories, films, or in the form of a sponge or a vaginal ring that slowly releases the active ingredient(s) over time (Bentley *et al.*, 2004; GCM, 2004; Wulf, Frost, & Darroch, 1999). Some of the potential advantages of microbicides are they are a woman-initiated prevention method and may be used without the knowledge of a partner. However, it is recognised that covert use may be challenging, due to the accompanying increase in vaginal lubrication (GCM, 2007). Currently, microbicides are not available, but it is suggested that with sufficient financial investment and commitment, an effective topical microbicide could be available soon (Alliance for Microbicide Development, 2007; GCM, 2004).

Existing research on microbicides suggests that there are particular physical characteristics and socio-cultural issues that may influence utilisation of a vaginal microbicide. The recognition of these broader concerns may be useful in creating a social marketing campaign to increase utilisation of topical microbicides. HIV prevention efforts cannot be successful

without integrating the cultural context of the targeted population (Richter, Harris, Coker, & Fraser, 2001; Scott, Gilliam, & Braxton, 2005). For instance, the importance of motherhood for many women has competed with the focus of much HIV prevention. In many African contexts motherhood and the ability to bear children is considered an essential role for women (Lear, 1996). Therefore, the use of barrier methods, including condoms, is an ineffective prevention strategy as it limits women's ability to reproduce. Attention to this issue may increase the likelihood of use of microbicides, as some formulas in development have the potential to dramatically improve individuals' ability to be protected from HIV and other STI, while maintaining the ability to become pregnant.

It is suggested that more research is necessary which focuses on the acceptability of microbicides in a cross-cultural context (Mantell *et al.*, 2005; Severy & Newcomer, 2005). Existing studies have identified some potential issues of concern. Thus in some cultures women do not readily accept touching their genitals or inserting products into their vaginas (Hardy *et al.*, 2003). In other cultures, however, the use of vaginal suppositories or spermicidal tablets is common, which may increase use of an insertive topical microbicide (Johnston, 2002). In contrast, cultural preference for 'dry sex' may affect how readily a microbial product with lubricating qualities is used (Van de Wijgert *et al.*, 1999). Relationship dynamics, power, and gender roles in broader structural and cultural frameworks may also impact on women's HIV risk and corresponding prevention method use (Koo *et al.*, 2005).

Creating partnerships with individuals working in the sexual and reproductive health field may help foster a culturally aware environment facilitating microbicide uptake. Currently, sexual and reproductive health professionals play an integral role in providing sexuality-related information and education, in addition to dispensing contraceptive and disease prevention methods (Brieger *et al.*, 2001). Integrating reproductive health professionals into microbicide education and social marketing efforts may significantly increase utilisation. With their help a clearer understanding of the cultural practices and contexts that may facilitate or challenge use may occur, to help increase microbicide use as well as underscore the need for more cross-cultural research.

The continuing rise in HIV infections around the world, in conjunction with the limited woman-initiated contraceptive and disease prevention options, has created an environment primed for the development of new technologies, like vaginal microbicides. As the research and development of these products continue, it is imperative to examine attitudes and perceptions

of the utility of microbicides in a variety of communities. The purpose of this exploratory study was to examine attitudes and perceptions of the utility of microbicides in the context of urban Ghana, a sub-Saharan West African country. The goal was to gain a better understanding of the unique factors that may influence individuals' attitudes towards and use of vaginal microbicides from community women as well as reproductive health professionals. Some of the topics that were explored included: existing contraceptive and preventive options and trends of use, issues around using a woman-initiated prevention method, gender norms, and the importance of motherhood. In addition, culturally appropriate ways to gain insight into the issues surrounding microbicide use in Ghana were explored to help inform future research efforts.

Methodology

Participant characteristics

The interview participants ($N=10$) were half women and half men, working in a variety of reproductive health settings including clinics ($N=4$), community organisations ($N=3$) and academic/research venues ($N=3$). All but one had some type of university or professional degree and all had children. The focus group participants were all significantly younger and had lower levels of educational attainment than the interview participants. The two groups included women aged 18-27 ($M=23.5$) who did not have any children at the time of the interviews. Tables 1 and 2 summarise the demographic characteristics of the participants.

Table 1. Interview participant characteristics (N = 10)

Participant characteristics	N	%
Gender		
Female	5	50
Male	5	50
Personnel type		
Clinic	4	40
Academic	3	30
Community based	3	30
Education		
University/professional	9	90
Not university/professional	1	10
Parental status		
Have child(ren)	10	100
Do not have child(ren)	0	0

Participant recruitment

Interview participants were recruited from reproductive and sexual health organisations in the capital city of Ghana, Accra, through professional contacts and by direct recruitment by visiting organisations and clinics. The recruitment goal was to interview 8-10 individuals who were employed in reproductive

Table 2. Focus group participant characteristics (N = 9)

Participant characteristics	Group 1	Group 2
Participants		
Number of participants	5	4
Gender		
Female	5	4
Age		
Range	18-27	19-27
Mean	24.6	22.3
Education		
University/professional	3	1
Not university/professional	2	3
Parental status		
Have child(ren)	0	0
Do not have child(ren)	5	4

health settings and conduct two focus groups comprised of 5-8 women. While I met my interview goal, the focus group recruitment was more challenging, thus the two groups had fewer than the envisaged number of women. The interviews were conducted with individuals working in a variety of settings to obtain a range of views and opinions related to microbicides acceptability. Individuals were informed about the study, invited to participate, and an interview was scheduled. Focus group participants were recruited using a purposive snowball sampling technique from a neighborhood close to the University of Ghana Legon in Accra. Young women were identified and invited to participate and asked to bring a friend with them to the group. No one invited to participate in the study declined, although one nurse asked that the interview not be recorded.

Data collection

Qualitative methodologies were employed, including individual semi-structured interviews and focus groups strategies. With Ghana's extensive HIV-related educational programme and media campaigns, most people had high levels of familiarity with HIV, and relative comfort in discussing issues surrounding the disease. Interviews were conducted at the workplace of ten individuals employed in the reproductive health field. Additionally, two single gender focus groups with young Ghanaian women were conducted. All interviews were conducted by the author, an American woman, in English. The gender match between the interviewer and the focus group participants was helpful in conducting the focus groups (Frith, 2000). In order to increase the legitimacy of the interviewer, a local professional contact aided the individual interviews by providing a direct introduction. Protocols were approved by Indiana University's Committee for the Protection of Human Subjects.

Measures

The interview and focus group interview guides were similar (see Appendix A). Thus, both the reproductive health professionals and the focus group participants were asked

questions concerning available contraception, cultural issues, and perceptions about microbicide use. In addition, gender and cultural norms were explored.

APPENDIX A. INTERVIEW AND FOCUS GROUP SCHEDULE

Introduce self and thank respondent.

Discuss the IRB Study Information Sheet.

Introduction: The purpose of this interview is to discuss your perceptions and attitudes about HIV/AIDS and of the utility of a contraceptive option that is currently in development called microbicides, which are substances that have the potential to reduce transmission of sexually transmitted infections (including HIV/AIDS), yet still allow women to get pregnant.

I have some questions that I will use to guide the discussion today to specific topics, but I am really interested in what you have to say and in what you think is important. However, I will occasionally be looking at the guide and writing notes so that I make sure to cover all the topics in the guide. I also have a short survey that I would like you to fill out when I am finished with the interview. With your permission, I will be tape-recording the interview today. Is that ok? (If yes, start recording.) Thanks again for agreeing to share your thoughts with me.

HIV/AIDS

1. The first thing I'd like to ask you about is HIV/AIDS. Ghana has a very comprehensive educational programme (at least in the urban centres), do you think the programme has been effective at increasing people's knowledge about HIV/AIDS? Why or why not?
2. Do you think the programme has been effective at changing people's behavior to protect against HIV/AIDS, for example increasing condom use? Why or why not?
3. What do you think people's perception of risk in acquiring HIV/AIDS is?
 - a. Does this vary by group (i.e. age, gender, region, ethnicity)?
 - b. Does this vary if people know someone who is HIV positive?

Stigma

4. In the United States, there are challenges that face people who are HIV positive, for example others may believe they are promiscuous, gay, or do drugs. What are some of the notions of stigma surrounding HIV/AIDS in Ghana?
 - a. Does this vary by group (i.e. age, gender, region, ethnicity)?
 - b. Does this vary if people know someone who is HIV positive?
 - c. For those working in an HIV/AIDS related position: Are there any issues that have impacted on your ability to do your job?
5. What are the different methods of contraception that are available in Ghana to prevent sexually transmitted infections and unplanned pregnancy?
 - a. Which are the most common? Why do you think that? (some examples: cost, can buy it anywhere, it's male/female controlled, takes away from the sexual experience, affects intimacy).
6. If you were going to develop an ideal contraceptive, what would be the characteristics of it?
 - a. In terms of mode (i.e. barrier, pill, shot)?
 - b. In terms of physical traits (i.e. smell, taste, feel)?
 - c. In terms of timing of when it would be used/applied (daily vs. for each individual sex act, and applied before or after sex)?

- d. In terms of what it protects against - STIs, pregnancy, both? (here I want to get at the cultural importance of motherhood)
- e. In terms of the cost?

Microbicides

There is a new contraceptive option that is currently in development, hoping to be available soon, called a microbicide. It is a substance that can substantially reduce transmission of sexually transmitted infections (STIs) when applied either in the vagina or rectum. Microbicides can be produced in many forms, including gels, creams, suppositories, films, or in the form of a sponge or a vaginal ring that slowly releases the active ingredient over time.

There are several issues that I would like to talk to you about regarding the potential use of microbicides.

7. The first issue consists of individual factors. How do you think that different people would respond to microbicides?
 - a. Would this vary by demographic variables (gender, age, education, religiosity, etc)
 - b. Would this vary by attitudes:
 1. towards contraception?
 2. about perceived HIV/AIDS and other STI risk?
8. The second issue consists of relationship factors. How do you think that couples would respond to microbicides?
 - a. Would this vary by length of relationship (short/new vs. long term)?
 - b. Would this vary by relationship type (monogamous/not, married, etc)?
 - c. Would this vary by level of openness/communication about contraception?
 - d. Would this vary by the level of perceived threat of partner violence?
9. The third issue consists of cultural factors. What do you think are cultural factors that would affect how people respond to microbicides?
 - a. In terms of gender relations/roles?
 - b. In terms of cultural norms (preference/not preference for dry sex, etc)?
 - c. In terms of the possibility of having to touch the genitals to apply?
 - d. In terms of the stigma surrounding HIV/AIDS?
10. If you were going to create an ideal microbicide, what would be the characteristics of it?
 - a. In terms of form (i.e. cream, jelly, film, sponge, suppository)?
 - b. In terms of physical traits (i.e. smell, taste, feel)?
 - c. In terms of timing of when it would be applied (several hours before, right before, the day before or after sex)?
 - d. In terms of what it protects against - STIs, pregnancy, both? (here I want to get at the cultural importance of motherhood)
 - e. In terms of the cost?
11. What do you think the overall level of interest in microbicides would be? Why do you think that?

Concluding Comments: That concludes my questions for you. Do you have any questions for me? Thanks again for your participation in the project.

Data analysis

All interviews, with one exception, were digitally recorded, transcribed verbatim, and managed using Atlas ti 5.0 (Muhr, 2004). The data analysis process included content analysis of the data for emergent themes based on the primary research questions (Weiss, 1994). Thematic analysis focused on specific issues associated with available contraceptive use patterns, the existing challenges associated with these options, and the factors including individual, relational, and cultural that may facilitate or inhibit microbicide use.

Results

Three main topics were discussed during the interviews and focus groups by the participants, namely available contraceptive and prevention methods, microbicide interest and acceptability, and cultural influences on microbicide acceptability and use.

Available contraceptive and prevention methods

Reproductive and sexual health professionals discussed the various contraceptive and disease prevention options currently available and used in urban Ghana. They reported that hormonal methods were more frequently utilised than non-hormonal methods. The most common hormonal methods reported were the oral contraceptive pill and the injection (DepoProvera®), with a nurse reporting that “most women use Depo.” The least utilised non-hormonal options included intrauterine devices, sterilisation, and foaming spermicidal tablets. Several nurses gave explanations for couples not using the spermicidal tablets, including the belief that they did not work well, “they don’t use it because it fails them,” and that sometimes the male partner did not like it because he could feel it. However, one participant believed that the foaming tablets offered security, and acted as a back-up method when used in conjunction with condoms.

The main complaint about available methods was articulated by a woman in the focus groups, “The problem is with all these things, pills, injections, and tablets, they have side effects.” The focus group participants all agreed that some of the available methods have potential complications, and might not be as effective as was claimed, like the injection, “on that one, babies are born plenty.” Focus group participants also reported that men, and often women, did not like to use condoms. One respondent discussed her dislike of condoms, “Sometimes it just hurts, you just get dry and it hurts.” A nurse also suggested that condoms detracted from feeling and reported many patients’ reasoning, “You don’t eat the toffee with the paper on, therefore, why would you have sex with a condom on?” The female condom had similar reactions, several participants indicating that men and women did not like to use the female condom because it was

too big and not easy to use. Several participants suggested that since many people did not like condoms, microbicides could be an acceptable alternative.

Microbicide interest and acceptability

All respondents, both women and men, suggested that Ghanaian women would be likely to have a high level of interest in topical microbicides, with varying interest in formulas with different characteristics. Most respondents believed that young women would prefer the formula that had disease prevention properties but would still allow for reproduction. There was a variety of opinion regarding timing of application of the microbicide; for instance when asked when she thought women would prefer to use a microbicide, one nurse reported “before and after [intercourse]” but that “if they don’t want the pregnancy they would use it before the sex.” Another nurse believed that in order to be preventive, “you would have to use it before sex.” A medical assistant, however, thought microbicide use would be most beneficial after sex, in case use of the method was forgotten in “the heat of the moment.” The focus group participants were keen on the covert use potential of microbicides. However, they did not think that surreptitious use would be a possibility, if as with the foaming spermicidal tablets one had to wait a certain amount of time before engaging in intercourse, “Yes, you have to let him know. Because you know it’s the time. So you have to let him know.” In addition, all the male interview participants responded that covert use would be unacceptable and it was necessary for women to tell their partners.

In addition, several of the focus group respondents thought that the potential lubricating property would be appreciated in comparison to using condoms. This was especially true for women who expressed a dislike for condom use. One woman affirmed that people would use microbicides because “using those [condoms] everyday, you are coming to hurt, if you just use condoms. And if your husband wants to go maybe two rounds and you have to change the thing [condom], you’ll be dry.”

Although there was enthusiasm for potential microbicidal products, some concerns were raised regarding their use. One interview respondent from a national health organisation acknowledged that new products were extremely difficult to market, and suggested that innovative education and marketing programmes would be required with the introduction of a microbicide. In addition, products that require multiple trips to the clinic or refrigeration would be unlikely to be used as frequently as other methods. For instance, nurses commonly reported difficulty in getting women to come back every three months to receive their injection. Finally, the similarity of methods of application of microbicides to available methods,

including foaming spermicidal tablets, may affect microbicide use as, according to a nurse, “Women think they [foaming spermicidal tablets] are deceiving and it often fails them and they don’t like it.”

Cultural influences on microbicide acceptability and use

Cultural issues that may impact on the utilisation of microbicides were discussed by the study participants. The cultural factors discussed during the focus groups were often related to gender and power issues. The women reported not feeling like they always had the ability to negotiate contraceptive use, and suggested the ability to use condoms and other contraceptive methods depended on economic and relational issues. One respondent reported “if they [women] see a man for two years then its okay, they’re not going to use their money to buy the condoms.” In addition, a researcher recited an Akan proverb, “If the drum is there, you don’t beat the side, you beat the top,” as the reason why Ghanaian men did not use condoms. She suggested that using a condom for sex was like beating the side of the drum, it just did not feel (or sound) right.

The importance of motherhood was discussed in both focus groups. One woman stated, “In Africa, yes, to grow old is to [have] born a baby. Me, I’m this old and don’t have a baby. If I can’t have a baby, it’s a problem.” The desire for and the inevitability of motherhood for these women led to reservations about using long acting contraceptive methods, for instance oral contraceptive pills and injectables, as there was a belief that they could influence future fertility. One focus group respondent discussed the injection, saying “That one is very risky”, emphasising her belief that it might affect later pregnancies.

In addition to these issues, contraceptive use was also regarded as influenced by societal perceptions of an individual’s status within the community. Condom use reported by a focus group participant, for instance, was complicated by the perception that sex workers were more likely to use condoms:

“Yeah, that one. Those people [commercial sex workers], they don’t get these sicknesses. It’s innocent people who get the sickness. They have their own condoms so they use them. They say ‘I have my condom here’ and the person will just put it on.”

This belief affects other people’s risk of acquiring HIV, as it may dissuade them from using condoms themselves, in order that they would not be viewed as a ‘prostitute.’ It could also affect how families respond to an individual’s acknowledgement of their HIV-positive status. While the focus group participants said that some families accepted sick relatives and helped, other

families did not, as “AIDS is a shameful sickness, so they’ll say you are bringing shame into the house and they don’t want it.”

Discussion

The purpose of this exploratory study was to assess the perceptions of reproductive health professionals and community women regarding the acceptability and use of microbicides in urban Ghana. Within the context of the HIV pandemic, prevention technologies, particularly ones that are female-initiated, are necessary. Most studies have not included individuals working within the reproductive health field who, due to their community connections, are likely to be valuable partners in the dissemination of microbicide products (Brieger *et al.*, 2001). The integration of local reproductive health professionals is a way to identify issues that may facilitate or challenge microbicide use, as well help create and add legitimacy to culturally appropriate education and marketing materials. The results from this study suggest that there is a high level of interest in microbicides; however, use may be moderated by several factors identified in the interviews and focus groups.

Microbicide interest and acceptability

There was a high level of reported interest in topical microbicides by the interview and focus group participants. They acknowledged that issues exist that may affect utilisation by Ghanaian women. Evidence supporting the identified issues included that currently available products that are applied similarly to microbicides, such as foaming spermicidal tablets, were not being employed as frequently as hormonal methods. This is an important consideration as reasons why these options are not being employed could have an impact on microbicide uptake. Additionally, reported interest varied by different characteristics including timing, covert use potential, and prevention of STI and pregnancy, or only STI. The final products’ properties would be likely to affect which individuals choose to use the product and for what reasons, for instance whether or not it prevents pregnancy. These characteristics are likely to change as the reproductive goals of women change, for example if they have already had all of the children they desire, a microbicide with contraceptive properties would be more attractive than it was prior to the completion of childbearing.

Cultural influences on microbicide acceptability and use

A variety of cultural issues were discussed that may impact microbicide use and acceptability (Koo *et al.*, 2005; Severy & Newcomer, 2005). The saliency of unequal power based on gender in relationships, and women’s economic dependence

on male partners, greatly influences the utilisation of existing contraceptive and disease prevention methods. The potential of microbicides to be used covertly may allow women to be more agentic in protecting themselves and their partners. However, covert use may be challenging for women, due to the accompanying increase in vaginal lubrication with microbicide use (GCM, 2007). This is a complex issue and the promotion of covert use should not put sole responsibility for reducing HIV transmission on women, as it is essential for both partners to be accountable and responsible. In addition, within the context of the importance of motherhood and the beliefs about the long term effects of existing methods on fertility, it will be essential to emphasise that some formulas may still allow women to get pregnant (Harrison *et al.*, 2003). This characteristic may significantly increase the uptake and use of microbicides in comparison to other methods for women with specific reproductive goals.

As microbicides are being developed, behavioural and social correlates, including use of existing products, economic dependency, and the importance of motherhood, will need to be assessed in influencing acceptability and use. In addition, the implications of potential side effects of microbicides and covert use will need to be addressed in education and marketing with both women and men.

Future microbicide acceptability research

As an exploratory study there were several limitations to the generalisability of this study, however, the study results are still useful and were similar to those of other studies (Bentley *et al.*, 2004; Koo *et al.*, 2005). Although the sample represented a diverse array of organisations, it was very small and was recruited using snowball sampling techniques. In addition, the participants were from a highly urban area, which also limits the ability to generalise these findings to other areas and communities. Finally, issues associated with conducting highly sensitive sexuality-related research in an international context may have resulted in a higher degree of socially desirable responding (Bancroft, 1997). This highlights the need for in-country partners, for which I am grateful to my associates at the University of Ghana Legon.

The positive results from this small study suggest a need for larger studies further examining the socio-cultural and physical issues that were raised by participants in a variety of contexts. Addressing these issues with individuals working in reproductive health settings is especially important, as they will be likely to provide information and education about microbicides to women. Predicting microbicide use may be difficult, given that most acceptability studies have focused

primarily on product attributes and not on interpersonal and contextual factors (Severy, Tolley, Woodson, & Guest, 2005). Therefore, future research efforts should address acceptability in terms of relational and contextual factors, in addition to product characteristics.

Overall, this study provides insight into some of the factors that may influence microbicide acceptability and use in Ghana. The results suggest a relatively high level of interest in microbicides among Ghanaians, and should be used to inform larger scale acceptability research in a variety of cultural and international contexts. Results also underscore the importance of partnering with reproductive health professionals in order to gain a broader understanding of facilitating and challenging factors to microbicide use. These partnerships will also allow for an avenue for microbicide promotion, giving potential users an opportunity to ask questions and get accurate information. In addition, creative social marketing strategies will need to be employed to emphasise the minimal effects on long term fertility, in order to make it a more attractive option for younger women, as well as avoid the issues surrounding the low uptake of the female condom.

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