

**The influence of male partners on young women's
use of a microbicide surrogate**

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ABSTRACT

Currently in clinical trials, vaginal microbicides are proposed as a female-initiated method of sexually transmitted infection (STI) prevention. Most microbicide acceptability research has been conducted outside of the United States and without consideration of the social interaction between sex partners, ignoring the complex gender and power structures often exhibited in young women's relationships. The purpose of the current study was to build on existing microbicide research by exploring the impact of male partners and relationship status on young women's use of a microbicide surrogate, an inert vaginal moisturizer (VM), in a large city in the United States (U.S.). Individual semi-structured interviews were conducted with 40 young women (18-23 years old; 85% African American; 47.5% mothers) following use of the VM during coital events for a four week period. Overall the results indicated young women had an interest in using the VM and offer insights into how future acceptability and use of microbicides will be influenced by gendered power dynamics. Two main factors affecting VM use emerged from the data: relationship dynamics and perceptions of male partners' VM evaluation. Male partners and relationship status highly impacted VM use, suggesting that relationship norms will need to be considered in the promotion of vaginal microbicides. The findings underscore the importance of trying to incorporate men into promotion efforts while encouraging a dialogue that focuses attention on gendered power dynamics that can exist in heterosexual relationships. Detailed understanding of these issues is essential for successful microbicide acceptability, social marketing, education, and use.

KEY WORDS: Microbicides; Young women; Relationships; Gender

INTRODUCTION

Women, especially women of minority and ethnic backgrounds, are disproportionately affected by sexually transmitted infections (STI), including human immunodeficiency virus (HIV) (CDC, 2007). The discrepancy in infection rates has led to increased attention on the gender-related factors that affect women's abilities to engage in health protective behaviors (Amaro & Raj, 2000; Mantell, et al., 2006), including the use of woman-initiated methods of STI/HIV prevention (e. g., microbicides). Microbicide development has been situated in the need for a woman-controlled method of protection against STI/HIV, as it is suggested that underlying gender inequalities limit women's abilities to protect themselves and ensure condom use (Stein, 1990). The rationale for microbicide development has been based on the assumption that women have less control than men in sexual decision making (Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002). Thus, a presumed advantage of microbicides is the potential for surreptitious use, potentially increasing women's control in self protection (e.g., Woodsong, 2004). However, traditional gendered power inequalities within sexual relationships may interfere with negotiation for consistent use of prevention methods (Bowleg, Lucas, & Tschann, 2004; Harvey, Bird, Galavotti, Duncan, & Greenberg, 2002; Mason et al., 2003), even those that are "female-controlled" methods such as microbicides (Bentley et al., 2004; Green et al., 2001; Koo, Woodsong, Dalberth, Viswanathan, & Simons-Rudolph, 2005; Mantell et al., 2006; Minnis & Padian, 2005).

A review of the existing research on prevention behaviors indicates that male partners and relational factors impact use of STI prevention methods, including diaphragms (Beckman & Harvey, 2006), condoms (Bird, Harvey, Beckman, Johnson, & The Partner's Project, 2001; Bowleg et al., 2004; Misovich, Fisher, & Fisher, 1997), and microbicides (Mason et al., 2003).

Bowleg and colleagues (2004), for instance, in a study of African American women, reported that men were very influential in decision-making about condom use. In addition, due to perceived lower risk of STI, individuals in longer term and close relationships tend to have lower levels of barrier prevention method use (primarily condom), compared to individuals in casual relationships (Misovich et al., 1997).

Sexual relationships incorporate complex associations of sexual behaviors, power, and pleasure. Traditional gender dynamics and social norms surrounding sexuality and gender within heterosexual relationships generally suggest that men hold more power than women (Bowleg et al., 2004; Bird et al., 2001; Carpenter, 2002; Wingood & DiClemente, 2000). This unequal power distribution often lessens the control women have in ensuring that their male partners consistently use prevention methods, such as male condoms (Bowleg et al., 2004; Harvey et al., 2002; Mason et al., 2003). Motivations for participating in sexual behaviors are complex and within relational contexts women's sexual motivations may be based on a desire to please their male partners (Nicolson & Burr, 2003), which may decrease their incentive to use protection.

HIV-related research has illustrated that women's ability to negotiate and use prevention methods, including woman-initiated methods, are influenced by gender dynamics within the sexual relationship context (Amaro & Raj, 2000; Bird et al., 2001; Bowleg et al., 2004; Dworkin & Ehrhardt, 2007). [This sentence seems a bit repetitive – you have made this point on the previous page (1st para).] Specifically, it is suggested that regional gender norms shape microbicide acceptability (Mantell et al., 2006). Much of the existing microbicide studies were conducted in an international context where gender relations are markedly different than in the U.S. (e.g., Bentley et al., 2004; Green et al., 2001). Recent work in the U.S. has indicated a changing power dynamic with some women describing more equal relational power structures in

their relationships (Carpenter, 2002; Harvey et al., 2002). This suggests that both the role of the male partner and relationship-specific concerns require more attention in order to fully understand the acceptability of woman-initiated methods of STI/HIV prevention. Thus, microbicides—if they become available—may be helpful in facilitating dialogue around these gender power issues, at least in the U.S.

In view of the above, much effort has been placed on the development and distribution of women-controlled methods, like the female condom (Gollub, 2000; Kaler, 2004) and microbicides (Mason et al., 2003). [I think that the preceding sentence would fit better on the previous page (in the last para, replacing the sentence “HIV-related research...”]:] Microbicides under development are coitus-dependent, requiring that women plan for a potential sexual event, be in tune with their own (and their partner’s) sexual desire and interest in participating in sexual acts, and be agreeable to using a product that requires them to touch their genitals. The regular use of microbicides by women will also likely necessitate some degree of negotiation between partners. Additionally, most microbicides under development will have unique lubricating qualities that may affect both women and men’s sexual pleasure and performance (Braunstein & Van de Wijgert, 2005; Philpott, Knerr, & Maher, 2006; Tanner et al., 2008; Zubowicz, et al., 2006).

In order to address the complex integration of a microbicide into the sexual repertoire of young women and their partners, it is important to understand the sequence of behaviors and the gender structure within the relationship. Thus, sexual scripting theory (Gagnon, 1990; Gagnon & Simon, 1973) and the theory of gender and power (Connell, 1987; Wingood & DiClemente, 2002; Wingood & DiClemente, 2000) served as the frameworks for this study. Sexual scripting theory proposes that there is a prescribed sequence of appropriate behavior that individuals

follow in their sexual interactions that is influenced by individual, interpersonal and cultural factors (Gagnon, 1990). Existing sexual scripts will likely influence women's desire and ability to use a future microbicide, especially when examining the interpersonal elements within sexual interactions and relationships.

The theory of gender and power suggests a three part structural model of gender relations that includes labor, power, and cathexis (Connell, 1987). The sexual division of labor often manifests as unequal employment opportunities and pay inequities that can leave women financially dependent on men leading to the second structure, the sexual division of power (Wingood & DiClemente, 2002). The power division results in gender imbalances in control while the final structure, cathexis, refers to the affective components of relationships and highlights the importance of social factors in determining and upholding these gender structures (Connell, 1987; Wingood & DiClemente, 2002). This model of gender relationships suggest that the imbalances between men and women exist in most arenas and have implications for women's power in negotiating sexual, contraceptive, and disease prevention behaviors within heterosexual contexts (Connell, 1987; Wingood & DiClemente, 1998; Wingood & DiClemente, 2000). The theory of gender and power, then, is useful in exploring the ways in which women may be able to introduce a microbicide into a sexual interaction. Both of the aforementioned frameworks, sexual scripting theory and the theory of gender and power, allowed for an examination of how women negotiate their sexuality within a specific relational context. An understanding of how the gendered power dynamics influence sexual behavior scripts was useful in considering how microbicides may (or may not) be worked into the dyadic sexual interaction.

The purpose of this study was to qualitatively examine the influence of male partners and relational factors on young women's use of, and attitudes towards, a microbicide surrogate, an

inert vaginal moisturizer (VM). As microbicides are not yet approved, some recent research has utilized vaginal moisturizers as surrogates for microbicides (e.g., Zubowicz et al., 2006) in order to assess the behavioral correlates of use above and beyond hypothetical product assessment. The specific aims of this study were to examine how factors related to male partners and sexual relationship characteristics might affect VM use among a young, urban, primarily African American population of women. The study is unique as this population have traditionally been underrepresented in sexuality research and have also been marginalized in the U.S. which may increase their risk for STI/HIV and unintended pregnancy. In addition, this is an important group to explore how gender and power dynamics in relationships are enacted with the introduction of the VM. A better understanding of how woman-initiated, coitus-dependent STI prevention products, like microbicides, are integrated into gendered sexual scripts or reflect the interplay between gender and power within relationships will be important as the field continues to explore the development and promotion of new STI/HIV prevention methods.

METHOD

Study design

This study was part of an ongoing, longitudinal study of young women's sexual health and behaviors with women recruited from urban community-based clinics in a large Midwestern city in the U.S. The areas served by these clinics are characterized by high rates of STI (CDC, 2005) and early child-bearing (Ventura, Matthews, & Brady, 2002) and low rates of HIV (Indiana HIV Resources & Statistics, 2004). All study protocols were approved by the University's Institutional Review Board.

All women participating in the larger project (N = 134), who were currently using the vaginal moisturizer (VM), were invited to participate in this study component. Study recruitment

continued until saturation was reached (Weiss, 1994); which resulted in a sub-sample of 40 young women over the age of 18. Written informed consent was obtained from each woman.

Since microbicides are currently in clinical trials and therefore not yet commercially available, participants were asked to use a commercially available VM (as a microbicide surrogate) for a four week period. The VM (Silken Secret by Astroglide®, BioFilm, Inc.©) was packaged in individual 5 mL applicators. Although other available products may more closely resemble microbicide candidate properties, this product was used because its water-based property ensured safety when used with condoms. There are distinct similarities between the VM in terms of physical characteristics (i.e., smell, lubricating properties) with formulations of microbicides under development. Women were asked to use the entire individually packaged application of the VM with each coital event. As we were interested in using the VM as a vaginal microbicide surrogate, the VM instructions were for vaginal intercourse; none of the participants asked questions regarding use with other activities (e.g., anal sex) but a few mentioned concerns with application before oral sex. Specific information was given about the VM, emphasizing that it did not have any disease prevention or contraceptive properties.

As required by the larger study protocol, the young women were randomized into three different timing conditions for VM application to mimic possible microbicide specifications (1 hour pre-coitus, 5-10 minutes pre-coitus, or 5-10 minutes post-coitus). In addition, structured daily diaries were completed each day of the four week period, even if the VM was not used, to obtain information related to demographics, VM use patterns, participation in sexual activity, and partner specific information (e.g., perceptions of partners' assessment of VM). Over the course of the larger study (approximately 36 months) each woman will complete each four week timing condition twice. At the completion of a VM cycle, 45 individual interviews were

conducted with 40 women. Of these, 40 were conducted following the women's first or second VM cycle; with five women, an additional follow-up interview was conducted six months later, following the subsequent VM cycle. This was done to obtain a more even distribution across timing conditions. None of the women invited declined to participate, although an additional woman was recruited as one woman was unable to attend her interview. Participants did not receive compensation for the interview or for using the VM but received a \$3 per day stipend for completing the structured diaries.

Participants

Participants were 40 young women between the ages of 18 and 23 years ($M = 19.5$ years, $SD = 1.4$). Of these women, 85% ($n = 34$) were African American and 15% ($n = 6$) were Euro-American. Most of the women were attending high school (17.5%, $n = 7$) or had graduated/obtained their GED (32.5%, $n = 13$). About half of the women (47.5%, $n = 19$) had one or more children at the time of the interview. The young women reported differing relationship durations, ranging from 2-72 months ($M = 21.6$ months, $SD = 18.3$; Median = 15.5). The majority of women (72.5%, $n = 29$) considered themselves to be in established or serious relationships with three of them living with their partners (two couples were cohabiting; a third couple was married). Another 15% ($n = 6$) considered their relationship to be casual or "just friends" and five (12.5%) did not consider themselves to be in a relationship. Table I summarizes the participant demographics.

Table I

Data collection and study measures

Demographic data were collected via the larger study protocol, which included quarterly structured interviews, self reported questionnaires, and daily diaries (see Fortenberry et al., 2005). The qualitative interviews were conducted by the first author (a 28 year old Euro-American woman) with the 40 young women. In order to increase comfort in discussing sexuality-related topics and reduce the likelihood of socially desirable responding, all interviews were conducted at a confidential location of the women's choosing (i.e., her house, friend's house). All names have been changed to pseudonyms to protect the women's identities. Interviews lasted on average about 30 minutes (range 16-51 minutes).

The interview guide was developed utilizing sexual scripting theory (Gagnon, 1990) and the theory of gender and power (Connell, 1987) constructs. The authors, with feedback provided by seven of the research staff from the larger study, developed the interview guide specifically for this study. The semi-structured interview was comprised of open-ended questions designed to elicit information about young women's experiences with the VM, with prompts used to encourage details. Interview guides were tested with an ethnically diverse group of four research assistants, including women the same age and race (African-American and Euro-American) as the study sample. Topics explored during the interviews included: relationship specific characteristics (e.g., How long have you been in a relationship with this person?), partner assessment of the VM (e.g., Do you think your partner likes sex more or less with the moisturizer?), and partners' knowledge of VM use (e.g., Did your partner know you were using the moisturizer?).

Data management and analysis

To assess the demographic variables, descriptive statistics were conducted using SPSS 14.0 (SPSS, 2006). The interviews were digitally recorded and transcribed verbatim.

Management and analysis of the interview data were conducted with the assistance of Atlas ti 5.0 (Muhr, 2004). Content analysis identified themes related to VM use based on emergent themes (Weiss, 1994). In addition to the first author, two research assistants, both young Euro-American women the same age as the participants, participated in the data analysis component to establish reliability of the analysis. The coding of the interview data occurred in two stages. First, a topical review of the transcripts identified issues related to the three different levels of sexual scripting theory (intrapsychic, interpersonal, and cultural scenarios) (Gagnon, 1990) and to the cathexis (social factors) from the theory of gender and power (Connell, 1987) for a detailed exploration of the relationship specific issues. After this initial wave of coding the research team developed a more detailed coding scheme to capture the emergent themes, for example partner specific VM evaluations (Weiss, 1994). Independent codings were compared and indicated high consistency among raters, with any discrepancies resolved via discussion until consensus was reached. After reviewing multiple potential quotes for relevance, clarity, context, and brevity, quotes are presented that best represented the emergent themes, illustrating both the commonalities and individual variation among the young women. Quotations are presented verbatim with the exception of some minor edits for readability and clarity.

RESULTS

VM use information

The women were distributed across the different VM timing conditions. At the initial interview 17 (42.5%) women were in the 5-10 minute pre-coital condition, 14 (35%) were in the 5-10 minutes post-coital condition, and nine (22.5%) were in the one hour pre-coital condition. Of the five women who were interviewed a second time (at completion of their subsequent VM use), three women (60%) were in the one hour pre-coital condition and one woman (20%) each

were in the 5-10 minute pre- and post-coital conditions. Over half (55%, $n = 22$) had used the VM in multiple cycles over the course of the larger study. The majority (92.5%, $n = 37$) of the women had used the VM during the four week period prior to the initial interview and all five had used it during the four week period before the follow-up interview. Of the three women who had not used it during the month before the interview, two had used it in a previous cycle and only one had never used the VM. The women used the VM during 107 of the 164 (65.2%) reported coital events, with male condom use reported for 53 (32.3%, $n = 53$) of these events. VM use information is summarized in Table II.

 Table II

Overview of factors affecting VM use

Gender and power dynamics that existed within the women's relationships influenced their use of the VM. Relationship dynamics affected women's ability to introduce the VM into sexual situations, negotiate use, and their comfort levels with covert use potential. The ways in which women enacted their roles within relationships were often very fluid, with half ($n = 20$) of the women displaying signs of both traditional (unbalanced gender power) and egalitarian (more balanced gender power) characteristics. Of the remainder, a proportion of women ($n = 14$, 35.0%) endorsed only the more traditional gender dynamics, and a smaller subgroup ($n = 6$, 15.0%) negotiated a higher level of equality into their relationship and described a more egalitarian type relationship. This latter group included Melissa (18), who commented:

There are those times when I feel like I want it, but then those times when I know that one day he didn't really want it but did it and I know he wants it now but I really don't but it's a compromise kinda like a teeter totter.

The recognition of sexual negotiation illustrates how some women have conceptualized their relationship as a place for mutual pleasure and compromise.

Visible in the young women's relationships were changes and variations as the relationships progressed. This pattern was evident in Melissa's (18) discussion of the changing nature of her sexual relationship and contraceptive practices with her partner over the course of two interviews:

Yeah! It slowed down a lot, it slowed down a whole lot. It was like at first I was kinda like apprehensive, like I don't really want to take birth control. So I felt like it was like on him to use condoms. And he doesn't really like condoms and so he was like [pause] but I'm not trying to have anymore kids. After [my miscarriage] I decided to start taking the pill. We used to just go at it [sex], like seriously. And it may be that we've just been around each other for so much longer that we're on the down side, it's just an element of our relationship.

The relationship progression coincided with a change in the frequency of sexual behaviors as well as a move from a barrier prevention method to a hormonal method; changes in contraceptive behavior will likely be similar to changes in microbicide use. This relationship fluidity underscored the complexity of relationships as well as the negotiation and compromise processes that exist in most sexual and romantic relationships.

Gender and power issues imbued women's discussions of the relational and partner specific factors associated with VM use. Within this larger gender frame, two overarching themes related to VM acceptability and use emerged from the data: 1) relationship dynamics, including the length and ?? of relationships, communication ability and comfort with covert use and 2) perceptions of partners' VM evaluations.

Relationship dynamics

The length and specific characteristics of young women's relationships were factor influencing VM use, as was communication about the VM, and comfort with covert potential or actual use.

Relationship characteristics and VM use

The way that the VM was negotiated into the sexual repertoire was evident in how women described their sexual interactions. Several women described primarily male initiation of sexual behavior. Denise (19), for instance, reported enjoying sex with her partner but also suggested her partner always initiated sexual behaviors ("he takes the lead because I'm more shy and he tells me what to do.") Elizabeth (19) reported, "He always want to have sex, so I know how he is. So we always have sex." Similarly, Sandra (20) described her interactions with the man she was having sex with (but whom she was not in a relationship with):

AET: So in general, who initiates the sex between you and—?

Sandra: Roland. Me. Well, Roland because he calls me like and he calls me and like talks about it and then I'll be like sure, I'll come and get you. Then he'll get here and he'll be like 'go get in the shower'. Then I'll do that.

AET: So he'll call, you'll go get him.

Sandra: Yeah, unfortunately.

AET: So that's sort of your routine, is that you take a shower before you...?

Sandra: Yeah. He thinks it makes it feel better.

Even though Sandra (20) recognized the inequality of her sexual interactions with Roland, she continued in their established pattern. For these and other women the partner had a large impact on a woman's overall attitude toward sex.

Nearly all of the women thought microbicides would be less problematic to use within the context of a more established relationship; as Helen (19) observed, "It's more comfortable

doing stuff like that [using the VM] with someone you have been with longer”. Crystal (18), who used the VM with several different partners, felt that it was easier with the partner that she had been with the longest, “Being together helped like build trust and know that I ain't lying, you know, closeness.” Trust was an important factor for comfort with VM use. On the other hand, while introducing the VM into the sexual interaction was easier in the context of an established relationship, STI concerns often appeared less salient for women with a long-term partner. This situation reduced interest in microbicides for the women ($n = 9$, 22.5%) who were satisfied with their current contraceptive method and not interested in STI prevention. Helen (19), for example, was content with her current contraceptive method and was not worried about STI with her partner (and her child's father) of nearly three years. She was not interested in a microbicide because “I think I would rather just use my patch and stuff because it has worked this long, so far doing good.” This illustrates the tension between STI prevention and fertility control. For other women ($n = 17$, 42.5%), potential microbicides were appealing as they would allow women to have more control in self protection, “You don't have to depend on the man for protection” (Teresa, 21). This allowed women to feel more agentic in the sexual decision making process. The importance of self protection extended into the possibility of control over use of microbicides. Jessica (18) liked the idea of a microbicide because she “could do it myself instead of having him put on a condom” and felt this was good because “you don't have to tell him if you don't want to.”

Communication and covert VM use

Young women's comfort with the possibility of surreptitious use was affected by communication ability as well as relationship status and context. The eight women who used the VM without telling their partner justified their decisions in a variety of ways, for instance Janet

(19) said of her two partners, “I didn’t tell them because men don’t seem to understand [why VM use would be important]” and Denise (19) chose not to “because he is hard to talk to and I don’t think he would have been comfortable [using the VM].” Most women ($n = 24$, 60.0%) felt that covert use was a possibility as “men won’t know the difference [in vaginal lubrication]” (Elizabeth, 19). Two women (5.0%), however, commented that covert use would not be feasible as “he’d probably know the difference [in vaginal lubrication]” (Carolynn, 19).

Young women’s ability to communicate with their male partners impacted their use of the VM. Many women ($n = 17$, 42.5%) had some discussion and 15 (37.5%) were very open with their partners regarding the VM. Covert use was more common for women who were less comfortable discussing the VM with their partners, which was often (but not always) associated with less established relationships. Post-coital VM application, in those situations, was appealing to women because “if he doesn’t want to [use the VM] you can go around” (Robin, 18) and it is “hard to talk pre-sex and easy to use after because women wouldn’t have to talk” (Denise, 19).

Women in more established relationships or those who had known their partner for an extended period of time tended to be more comfortable communicating about the VM compared to the women who defined their relationships as more casual or as “friends” (Mary, 18). Many of these women were very comfortable raising the topic with their partners, like Karen (21) “Well, my baby daddy because he is the only person I have been with for years, it’s just easy to talk to him... Told him we’re using [the VM]. It didn’t bother him one bit, he didn’t care, he liked it [the VM].” Other women ($n = 5$, 12.5%) felt that women (including themselves) should tell their partners. For example, Patricia (20), who had been with her partner for two years, discussed issues of communication, “If you can’t be honest with your partner then who can you be honest

with? You should be able to tell your partner anything, whether it is good or bad.” Lisa (23)

agreed with the importance of communicating openly with a partner:

‘Cause I mean truthfully, ya know when I think about a partner I think about something that is just a best friend but somebody I have to like a lot that I can go that far with... So that’s why I really share everything with him ‘cause I want him to know that if anything happens [like an STI] then we’re in this together.

Other women ($n = 17$, 42.5%), both those in both new and established relationships, struggled with how to talk to their partners about the VM. This was true for Danielle (18) who had difficulties discussing use with her partner even after using the VM over three timing conditions, “Because I didn’t know how to talk about it [using the VM] with him.”

The actual use of the VM surreptitiously was more common for young women with casual partners compared to women in more established relationships. For the most part, women who were involved in serious relationships felt it was important for them to tell their partners about using a future microbicide, “Yeah... because you should talk to your partner about something like that thing [microbicide], if you should ever use it” (Gloria, 18). Women in more casual relationships often felt that they needed to take precautions to protect themselves which resulted in higher frequency of covert VM use. However, Rose (20) who had been with her partner for three years while her friends were in newer relationships, suggested that VM and microbicide use would be less complicated for her than her friends:

Easier for me [to use the VM or a microbicide] because their guy friends wouldn't like it or wonder why they're using it or something... They'd think she's weird or something (laughs)... They'd probably think that something's wrong with her [for example she has an STI].

It was suggested that covert microbicide use within longer relationships would equate to non-trust and “passing the blame that you [male partner] are cheating on me and having sex with

other females so I need to use this so I won't catch nothing" (Patricia, 20). The assumption of disease was also seen in one of Crystal's (18) partner's response to VM use:

I told him it was a test [study] that I was doing and he was like 'what test? Do you got something?' What do you mean do I got something? He thought I was getting tested like I got something. He is so foolish.

As future microbicides' primary role will be for disease prevention, the associated stigma of use may be more pronounced for women trying to introduce a microbicide into an existing relationship as opposed to during relationship formation, especially if the microbicide does not have contraceptive properties.

The way in which women defined their relationships impacted their attitudes towards surreptitious use. Linda (22), who was using the VM covertly, reported that "If we're having sex I think he has the right to know, if we're *really* together." The length of the relationship, however, did not always mean that the women trusted their partners. For example, Grace (18), who thought covert use would be a benefit of microbicides, said of her partner, "We've been together four years but I still don't trust him." Melissa (18), who was in a relationship of over a year, was also a proponent of surreptitious use, especially if microbicides would protect both partners. She reported that "if he wasn't up for it [using the VM], I'd still use it and he wouldn't know."

Several women ($n = 11$, 27.5%) felt that covert potential was not necessary or a critical issue for VM use, "I don't really think it's [using the VM covertly is] a big deal" (Danielle, 18). They were comfortable with a higher level of ambiguity in terms of when you should or should not tell a partner about use. Evelyn (21) commented "because you just, I mean, you don't have to let him know what you're doing to protect yourself. Not that I'm saying it should be a big secret, but if you don't wanna tell him you don't have to." Another woman thought it was unnecessary to

ask their partners' opinion of the VM because "he was about to get laid, do you think he was complaining?" (Sandra, 20).

In microbicide acceptability research one of the concerns associated with covert use is the potential for a negative or violent reaction from the male partner. In this study, few participants ($n = 3$, 7.5%) believed that partners would be upset if they used the VM or a microbicide covertly and only one woman discussed a situation where her partner discovered surreptitious use. Crystal (18) decided to use the VM with a new partner because "I like it and I wanted to use it." When he discovered she was using it he was upset and said "No, we ain't using it!" and thought she was trying to "pull something over on him." This disagreement led to the dissolution of their relationship.

Perceptions of partners' VM assessment

Perceptions of male partners' VM assessments varied considerably across women. Thirty-eight percent of women ($n = 15$) viewed their partners' attitudes towards the VM as neutral, 32.0% ($n = 13$) said their partners had a positive evaluation, and only 5.0% of women ($n = 2$) reported that their partners responded negatively to VM use. With two male partners (5.0%) the VM was not used and eight male partners (20.0%) were unaware of VM use. Male partners' assessments clearly impacted VM use for many of the women. This was articulated by Grace (18), who commented, "I'm female so if it ain't his way, it ain't no way." However, young women differed in how strongly they were influenced by their perception of their partners' evaluation of the VM.

Perceptions of a positive VM evaluation by a male partner led to an increased likelihood of use. Crystal (18) said of her partner, "he don't got no problem with it [the VM], my little honey cakes." Her partner was very explicit about his desire to use the VM, "he said 'I really like

this, we gotta use this all the time, I'm serious!" Similarly, Patricia (20) reported that her partner had a positive VM evaluation and thought that men would be very interested in microbicides as an alternative to condoms. She suggested that men would indicate interest in sex by saying "woman, go get that [microbicide]!"

While positive evaluations by male partners were associated with increased VM use, the two women who reported negative evaluations by their male partner were less likely to use the VM. This pattern held, even though one of these women had a positive assessment of the VM. Carolynn (19) clearly enjoyed using the VM and thought sex was more pleasurable with it. She did not tell her partner that she liked sex more when using the VM and since "He don't like it [the VM]," they never used it again. She was adamant that she would "make him use it [microbicide]" if it protected against STI or pregnancy but she was not able to demand use to increase her sexual pleasure. Crystal (18) experienced both positive and negative responses to use of the VM from her different sexual partners and her experiences illustrated well the role of male partners in VM use. Over the course of the eight months between the two interviews, she used the VM with three different partners. Two were very positive about sex with the VM, which led to frequent use, while one partner disliked the VM and use immediately stopped.

Several women ($n = 12$, 30.0%) emphasized that if microbicides existed they would be more attractive to women if they were also products that could enhance male pleasure. Women's pleasure was mentioned less frequently ($n = 2$, 5.0%). They suggested that if the male partner liked the VM or a future microbicide then they would keep using it. Similarly, women stated that they would use the VM to increase male partners' pleasure even if they themselves had a negative appraisal of it. Karen (21) reported using the VM "because I mean it's only going to

help, *even though I don't like it*, you've got to please him the best that you can." Lisa (23) also used the VM but discussed her and her partner's discrepant evaluations:

AET: What did he think about it [VM]?

Lisa: Oh he just loved it!

AET: How come he liked it, do you think?

Lisa: The same reason I didn't like it, probably. *You know how a man is*, anything you like be the opposite of the things we be liking.

This suggested a gender component in the way some women assessed and used the VM. Women were willing to use products they did not like for their partners' enjoyment, "cause that's how men like it" (Gloria, 18). Similarly Karen (21) stated "And if you got that one [the VM] you ain't got to worry about the feeling it's gonna be warm, its gonna be wet *and to a man that's gotta be the best.*"

Other women placed less emphasis on their male partners' evaluation of the VM. Melissa (18) who enjoyed using the VM suggested that "If he wasn't up for it [VM use] he wouldn't have and I would have still used it. I wouldn't have a problem." These women also focused less attention to men's sexual pleasure, put more emphasis on their own or mutual sexual pleasure, and felt this was an important component of a relationship. Mutual pleasure or enhancement through VM use was mentioned by 40.0% ($n = 16$) of the women. Crystal (18), for example, strongly believed the VM "feels good on both of them, both sexes," therefore, microbicide should be promoted in terms of the benefits of mutual pleasure.

Male partners' assessments of the VM, however, were sometimes more "neutral". For instance, although Barbara (19) and her partner liked the VM during sex, he also liked sex without VM. Since he did not have a distinct preference, she lacked the encouragement that other women received from their partners to either use or not use the VM. This ambivalence likely

influenced their decision not to use the VM with all the coital events. Additionally, Jessica (18) who did not like using the VM, suggested that she “would probably use it [the VM] more if he would have said something else about it, but he never did.” In summary, the influence of male partners’ assessments of the product suggests that, in many instances, their role in microbicide acceptability will be crucial.

DISCUSSION

The purpose of this study was to explore the influence of male partners and relationship dynamics on young women’s use of a vaginal microbicide surrogate. The factors influencing VM use included specific relationship dynamics, including communication ability and comfort with covert use as well as young women’s perceptions of their partners’ assessment of the VM. Consistent with previous HIV and condom literature, male partners are an important factor in protective health behaviors (Bowleg et al., 2004; Mantell et al., 2006). The results of this study expand on this existing literature by illustrating the complexity of young, primarily African American women’s relationships and the impact of the gendered power structures on sexual behaviors and decision making.

Relationship status influenced young women’s use of the VM, with utilization more likely in established relationships. Research in the U.S. suggests that marriage or long-term relationships may be a protective factor for STI transmission (Koo et al., 2005). Yet a few women in this study demonstrated a lack of trust in their main partner and reported wanting to do what they could to protect themselves. This attitude may be a reflection of their perception that their partners may be seeking sex elsewhere. The desire for self protection could also be a reflection of women’s decreased ability to negotiate male condom use (e.g., Bird et al, 2001; Bowleg et al., 2004) making microbicides, a woman-initiated method of STI prevention, an

attractive option. The longevity and definition of the relationship (e.g., as romantic or friendship) further complicated VM use behaviors. Crystal (18), for example, had been with each of her partners for varying amounts of time but had known all of them for an extended period of time which may have increased her comfort with VM use, sexual communication, and covert use potential. This is consistent with previous research that suggests individuals in longer term, supportive relationships are more likely to communicate with their partners about contraception and STI prevention (Kaestle & Halpern, 2005; Short, Ramos, Oakes, & Rosenthal, 2007). Young women's relationships were not static; relationship progression changed the frequency of sexual behaviors and contraceptive and disease prevention practices. These relationship processes will likely also impact microbicide use trends and trajectories.

Traditional gender power structures (Connell, 1987, Wingood & DiClemente, 2000) were implicit in many women's relationships. However, the results of this study are also consistent with more recent work suggesting that although gendered power dynamics exist, they are less pronounced within young people's relationships than has been assumed previously, and vary considerably from woman to woman and within women over the course of different relationships (Carpenter, 2002; Carpenter, 2005). The findings also underscore that within relational contexts the motivations for engaging in sexual behaviors may be more complex than desire for pleasure and control (Higgins & Hirsch, 2008; Tanner et al., 2008). Motivation may also include the giving of sex as a gift, desire for intimacy, expression of love, and relationship maintenance (Carpenter, 2002; Carpenter, 2005, Meston & Buss, 2007). There was marked variation across women and relationships, with many women moving away from subordinate female roles and incorporating more fluid gender and power dynamics into their relationships. With both traditional and egalitarian gender scripts illustrated in women's sexual scripts and VM decision

making, the incorporation of men into microbicide promotion efforts as well as HIV interventions will be crucial in order to increase effectiveness.

Consistent with previous findings (Woodson, 2004; Mantell et al., 2005; Zubowicz et al., 2006), some of the young women in this study were interested in the potential of surreptitious microbicide use. Most of the young women thought that a future microbicide would be beneficial and acceptable to use covertly. The attractiveness of covert use was moderated by relationship status; most women in more established relationships felt they should tell their partners about use. The influence of relationship status and communication with partners supports previous research suggesting that female-initiated prevention methods may improve communication between partners (Gollub, 2000). However, some women reported difficulty discussing VM use with their partner, highlighting the complexity and variability that exists within and across relationships. The issues identified around communication suggest it may be useful to include information about how to discuss microbicide use with partners in educational materials.

Covert use was seen as a particular benefit for women in newer relationships or if there was suspicion that the partner was not being faithful. It was acknowledged that microbicides would be much more difficult to introduce into established relationships if they have only disease prevention and not contraceptive properties. The introduction of microbicides as a disease prevention method focusing on HIV may be met with some resistance due to the well documented stigma associated with HIV (Herek, 1999; Reece, Tanner, Karpiak, & Coffey, 2007), especially within more established relationships. This suggests that the way in which microbicides are promoted, for instance highlighting the disease prevention, contraceptive, or lubricating characteristics, will be important to consider in order to ensure utilization while not alienating potential users. Recent work has suggested that promoting the sexual pleasure aspects

of prevention methods in STI and HIV prevention campaigns may increase condom use rates (Higgins & Hirsch, 2008; Philpott et al., 2006) and will likely also be a useful strategy in microbicide promotion.

Women's discussions about the potential of surreptitious VM and microbicide use focused on their ability to use the product for self protection, rather than their ability to use it and not tell their partners, an attitude that was especially true for women in established relationships. The focus on the covert potential of future microbicides has complex consequences, suggesting that it is the woman's responsibility to control the outcomes of sexual interactions for herself and her partners. It has been demonstrated that women in some circumstances do not have the power to ensure protective methods are used (Bird et al., 2001; Bowleg et al., 2004), which draws attention to the aforementioned gendered imbalances that may exist within relationships. While issues exist in terms of male partners' role in microbicide use (e.g., potential for violence, preference for dry sex), these findings highlight the importance of including men in microbicide research and marketing so as to not perpetuate this gendered imbalance (Dworkin & Ehrhardt, 2007).

Many women discussed the importance of their partners' pleasure in determining the decision to use or not use the VM. This suggests women's willingness to compromise and accommodate male partners' desires, emphasizing the importance of male participation in the promotion of STI prevention methods (Nicholson & Burr, 2003; Tanner et al., 2008). This consideration of the partners' assessment is also seen in men's willingness to accommodate their female partners' preference for PDE-5 inhibitor use (e.g., Conaglen & Conaglen, 2008) which underscores the dynamic negotiation processes that exist in heterosexual relationships. In addition, while some women spoke of their partners' pleasure, other women emphasized the

importance of self and mutual pleasure. Specific VM characteristics, such as the lubricating qualities, which will likely be characteristic of future microbicides, may enhance sexual pleasure for both partners, increasing the likelihood of future microbicide use (Braunstein & Van de Wijgert, 2005; Philpott et al., 2006; Tanner et al., 2008). This unique benefit for both partners may also be useful in the promotion of positive sexuality for young women as it allows them to acknowledge and give attention to their own needs and pleasure within relationships (Higgins & Hirsch, 2008, Tanner et al., 2008). This attention to female pleasure adds to the existing sexuality discourses for women that have primarily focused on male sexual pleasure.

Although surreptitious use of microbicides may be an acceptable option for some women in some circumstances (e.g., commercial sex workers), highlighting the sexual pleasure potential of microbicides and encouraging communication between partners may be more useful (and practical) for young women. This approach may ultimately allow women to have more control over their bodies, the exploration of their sexuality, and the use of self protective measures. This is similar to recent work focusing on incorporating sexual pleasure, in addition to disease prevention, into marketing campaigns for male and female condoms (Higgins & Hirsch, 2008; Philpott et al., 2006). An additional benefit of pleasure-focused microbicide promotion could also be increased dialogue around gender issues, encouraging the movement toward greater gender equality in heterosexual relationships.

Microbicides are not yet available; thus, both a strength and a limitation of this study is the use of a VM as a microbicide surrogate. While product characteristics are comparable and the study was designed to have timing conditions similar to future microbicides, the VM did not have contraceptive or disease prevention characteristics and may be quite different from first generation microbicides. These issues likely influenced young women's use of the VM and their

willingness to use and discuss it with their partners as they may be more likely to discuss using an actual microbicide if it does have protective properties. The conceptual framework (sexual scripting theory and the theory of gender and power) that guided the study strengthened the results by allowing these issues to be explored with the young women.

The population of women involved in the study may be unusual in their willingness to use a VM and respond to questions about their sexual lives and as such their experiences may not be representative of experiences other women may report. The sample was strategically chosen as young, urban African American women in the U. S. is a population that is disproportionately impacted by the negative sexual health outcomes and are underrepresented in sexuality research, especially in studies that do not focus solely on these negative outcomes. An important strength of this study was the fact that because of the protocol of the larger project, requiring weekly home visits, relationships developed between the first author and the young women interviewed. These relationships did not seem to be precluded by the racial differences between the first author and some of the participants. The development of a relationship between researchers and participants is noted as a helpful component of qualitative research (Huygens, Kajura, Seely, & Barton, 1996) and likely allowed for a higher level of disclosure about sexuality-related issues, even for more reserved women.

Overall the results indicated that the young women had an interest in VM use and offered insights into future microbicide acceptability and use. The negotiation of sexual scripts between partners suggests that the perceptions of male partners' positive (and negative) assessment of the VM as well as relationship dynamics will affect young women's use of microbicides. Thus, the promotion of future microbicides as enhancing sexual pleasure for both partners (Philpott et al., 2006), in addition to disease prevention, could be beneficial in microbicide marketing, especially

for young urban women in the United States who tend to be at higher risk for STI/HIV transmission (CDC, 2007). The study results emphasize the importance of trying to incorporate men into microbicide promotion efforts, while encouraging a dialogue that brings attention to some of the gendered issues that can exist in heterosexual relationships. Most microbicide acceptability research has been conducted without consideration of the interactions between sex partners, ignoring the complex and fluid gender and power structures often exhibited in young women's relationships. Despite the limitations of the current study, the findings contribute to our understanding of the relational and partner factors that may influence acceptability and use of microbicides. Further research to elucidate these factors would be beneficial in designing targeted educational campaigns and effective instructional materials.

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