Young Women's Experience with Using Videoconferencing for the Assessment of Sexual Behavior and Microbicide Use

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Abstract

Background: Videoconferencing (VC) systems are increasingly recognized as a viable means of enhancing communication across different geographic regions and have been used within multiple settings. Until now, despite increased use and diverse applications, VC has received relatively little attention as a data collection tool in qualitative research. The literature on preferred data collection methods for sensitive topics offers different perspectives, with no clear consensus on the best approach for collecting sensitive data. We sought to determine if VC is a feasible tool for eliciting sexual history from participants in a vaginal microbicide study. **Subjects and Methods:** Fifty-nine young women who participated in a Phase 1 microbicide safety and acceptability study at three sites (Tampa, FL; Pittsburgh, PA; and San Juan, Puerto Rico) were interviewed through VC from New York City. During the third VC session, participants gave feedback on their experience using the method. **Results:** Most of the participants reported that they preferred VC to phone-only interviews. Participants noted that because of the sensitive nature of the interviews, geographical distance from the interviewer facilitated disclosure. Despite some technical problems, such as the time delay in video transmission and occasional loss of connection, participants expressed a high degree of satisfaction with using VC. **Conclusions:** VC seems to be a feasible alternative form of conducting in-depth interviews on sensitive topics. VC enables data collection from geographically dispersed research participants without the cost and time burden of traveling to sites or developing local interviewer capabilities when the number of interviews is small.

Key words: videoconferencing, interview, qualitative research, microbicide, sexual behavior

Introduction

Videoconferencing (VC) systems are increasingly recognized as a means of enhancing long-distance communication. VC has been used in healthcare settings for mental health services,^{1,2} pharmaceutical care provision,³ lifestyle counseling,⁴ and physiotherapy.^{5,6} Also, VC is an alternative and innovative way of carrying out the traditional face-to-face interview.⁷⁻⁹ It allows for real-time communication through audio and video equipment between groups or individuals anywhere on the Internet.^{10,11}

VC has several advantages for research. It is viable, convenient, and cost-effective for research at multiple sites as an alternative to in-person interviewing, eliminating time-consuming and expensive travel^{12,13} and allowing participants in remote locations to participate.¹⁴ Furthermore, VC enables highly trained personnel to conduct interviews from a central location and to avoid the interviewer variability and logistic challenges present when multiple interviewers work with participants at different sites.¹⁵⁻¹⁷

There are some limitations to using VC for interviews. For example, it could restrict the sample to participants who have access to the necessary technology.¹⁸ This can be avoided if the video interviews are conducted at organizations with standard equipment and fast broadband. Other limitations, such as problems with sound and video quality, may hamper the reliability and quality of VC. Eye contact via a Web camera may be difficult to maintain because of insufficient image resolution, the separation of camera and monitor,¹⁹⁻²¹ or the fact that the person must look at either the camera or the image on the monitor.

Nevertheless, remote interviews including VC may work well for collecting data on sensitive topics such as sexual behavior or substance use. Participants may feel a greater sense of privacy because of the geographical distance and be more willing to disclose personal information than in an in-person setting.^{13,22,23} However, the literature offers no clear consensus on the best approach for collecting sensitive data.²⁴⁻²⁹ Given that many researchers who focus on sensitive behaviors prefer the in-depth interview for data collection,^{30,31} it is important to study whether the use of VC influences participants' ability and willingness to open up to the researcher.³² Despite increased use and diverse applications, VC has received little attention as a data collection tool in qualitative research.^{12,33-35}

We sought to determine if VC is a feasible tool for eliciting sexual history from participants in a vaginal microbicide study. We explored participants' overall opinions about the use of VC for qualitative

interviewing, perceptions of privacy, ease of disclosure, and confidentiality when using VC during interviews about sexual behavior, ideas about how VC compares with phone-only and in-person interviews, and feedback on technical aspects of using VC in the research setting. We conclude by offering recommendations for the effective use of VC for qualitative interviews and strategies to incorporate it successfully into future research.

Subjects and Methods

SAMPLE

Participants were young women who participated in two parallel and interlocked studies: a placebo-controlled Phase 1 microbicide safety and acceptability study and a simultaneous study exploring microbicide acceptability and participants' attitudes about it (for details, see McGowan et al.,³⁶ Carballo-Diéguez et al.,³⁷ and Giguere et al.³⁸). The studies took place between August 2007 and November 2009 at three sites: Tampa, FL; Pittsburgh, PA; and San Juan, Puerto Rico. The studies were reviewed and approved by the Institutional Review Boards at all participating institutions.

Eligible participants were women 18–24 years of age, human immunodeficiency virus–negative, nonpregnant, sexually active, and using an effective contraceptive method. The mean age of the participants was 20 years. Forty-nine percent considered themselves white/European American, 39% Latina (100% of participants from Puerto Rico identified as Latina or Hispanic), 8% African American, and 3% Asian/Pacific Islander. The majority (66%) of participants had some college education, followed by 16% with a college degree and 8% with a high school degree.

PROCEDURES

Participants were interviewed via VC. A bilingual English/Spanish-speaking, gender- and age-matched interviewer conducted three separate, one-on-one, semistructured interviews from an office in New York City, following a guide. Computers at the study sites and at the interviewer's location equipped with a Web camera and broadband access to the Internet were used for video transmission. The Windows Live Messenger instant messaging program was used to connect participants to the interviewer via the Web camera; however, to enhance confidentiality the microphones on the computer were turned off so that the audio would not be transmitted over the Web. This was an Institutional Review Board requirement. The audio portion of the interview was conducted by telephone, and only the audio was recorded. Participants were seated in a private room, and no identifying information about participants was recorded in the audio files or transcripts.

ASSESSMENTS

First videoconference. Participants were introduced to the interviewer via VC. The purpose of this initial contact was to personalize the experience and establish an initial rapport.

Second videoconference. After 14 days of product use, the participants had a second VC interview on microbicide-use adherence, acceptability, and overall attitudes toward microbicides. The interviewer

sought to explore the context in which young women were using the gel during sex by asking about the participants' relationship with their partners (i.e., What kind of relationship you have with him/them?), their usual sexual behavior (i.e., What does having sex with this/these guy/s mean to you? What do anal, oral, vaginal sex mean to you?), and the effect of the gel on sexual intimacy and enjoyment (i.e., How does using the gel affect the sexual encounter including spontaneity, privacy, negotiation, pleasure, and partner pleasure?).

Third and final videoconference. After 7 days of no product use participants underwent a third and final interview via VC. Participants were asked their opinions about VC, how VC compares hypothetically with face-to-face or telephone-only interviews, the impact of the interviewer's location, and feelings about different characteristics (age, gender, accent, etc.) of the interviewer. This third interview provides the bulk of the data analyzed for this article.

In total, 177 videoconferences were conducted with 59 participants. All of the participants completed all three video interviews.

DATA MANAGEMENT AND ANALYSIS

Videoconferences were audio recorded and transcribed with transcripts verified for accuracy. A codebook was developed based on categories and themes from the interview guide. A group of researchers coded the transcripts using NVivo version 8.0 software (QSR International Pty. Ltd., Doncaster, Australia). Comparisons yielded over 90% intercoder agreement consistently. For the present analysis, we explored the code "Teleconferences," selected quotes that described participants' experiences with VC, and, when necessary, translated them from Spanish into English.

Results

Overall, the participants felt there were more advantages than disadvantages to using VC. Below we report the main themes that emerged in the interviews.

OVERALL REACTION

When participants were asked about their experiences using VC in the study, approximately 70% reacted favorably, saying that it was a novel and interesting approach for a study interview and they appreciated being able to see the person with whom they were talking. Some participants had never used VC before:

It felt like we're in the 21st century...—So it's cool to see, you know, your facial expressions. It kind of makes it a little more um...personal. (ID 45, 23 years, Tampa)

But it was great, I never had an experience like this, but it was cool. It was something new, something different [...]. (ID 04, 22 years, San Juan)

PRIVACY

In general, the participants described VC as a private, intimate, friendly, and fun procedure and emphasized that VC made them feel very involved in the study and comfortable with speaking freely to the interviewer:

Well you can see that like it's a real person and they're not just in, like, a cubicle with, like, 30 other people around them. It's just I guess more private also. (ID 20, 19 years, Tampa)

EASE OF DISCLOSURE

Many participants said that VC helped them feel willing to disclose their personal stories and to "open up":

You get to see who you're speaking to. I think that maybe makes a difference. I don't know. Because it does feel a little more personal, maybe you'll be more at ease to kind of talk and be more comfortable answering questions. (ID 42, 24 years, Pittsburgh)

I like the whole system better, because in person sometimes, you know, you close up a little, 'cause it's not like they're prying but they do ask more questions, but at least this way we're talking about this but I don't really know you so I can tell you everything, but if you were in front of me and we could talk about other stuff, as well, it would be kind of uncomfortable...there's like a barrier there since we're not on the personal level, since we haven't really met. I can just tell you, and I know you're not going to judge because you know I'll probably never see you! (laughter). (ID 30, 23 years, Tampa)

However, around 10% of the participants mentioned that talking about their sexual behavior with the interviewer while seeing each other's face on the screen made them feel embarrassed:

I think it makes it easier when you see the person and, like, to answer the questions. But sometimes when it's something very personal, seeing the person is just, like—it makes you feel a little uncomfortable. Like, personal questions. Just having a person looking at you and just... I don't know. (ID 32 21 years, Tampa)

Around 30% of the participants indicated that although they did not feel embarrassed, others might and therefore would not answer the questions fully:

... maybe some of the other girls in the study aren't comfortable with you seeing them, because—especially because we're talking about sex and vaginas, you know, so maybe they wouldn't want you to be looking at them...I think it's a good idea, I just—I don't really think it would change my answers personally, but like I said a second ago, I could see where it would inhibit some of the other girls. Maybe they would hold back and they wouldn't want to say something that could be important because they're embarrassed that you can see them. (ID 52, 18 years, Tampa)

Participants' opinions about the VC technology used in these interviews were often colored by the intimate nature of the interview. Some of the discomfort caused by discussing sensitive topics was alleviated by the use of a gender- and age-matched interviewer. In addition, having the same person conducting all the interviews was also perceived as an advantage.

CONFIDENTIALITY

Some participants liked that the interviewer and the respondent were in different cities because it decreased the chances of running

into each other, which could be awkward, intimidating, or embarrassing:

Well, that is good. It gives you a sense of assurance because, well, one says intimate things that one might not tell just anyone. So maybe if I could run into you on the street, it's like I might feel embarrassed, because it's like I am ashamed and maybe I wouldn't even say hello. (ID 39, 20 years, San Juan)

That's a good thing. (laughter) I really don't want to bump into you in like CVS [a popular drugstore chain in the United States], you know, and like, "Oh, that's that girl from the gel study." So—and it's also the fact that like you sort of know a lot about my sexual patterns and my life patterns by now so it's a little bit intimidating, you know, for someone to know so much about you and you not knowing anything about them, and it kind of like gives you ammunition right here. (ID 28, 21 years, Pittsburgh)

COMPARISON WITH PHONE-ONLY INTERVIEW

Participants were asked how VC compares hypothetically with telephone-only interviews. Most of the participants preferred VC to using only the phone for the interview. Respondents stated that VC felt more personal than the phone and made communication easier. Compared with a phone conversation, VC motivated participants to give more honest responses, and they felt more trust in the interviewer:

I think [videoconferencing]'s definitely more personable, because seeing you, you're not just another research person. You are a real person that I can see and talk to. I think it makes me want to tell you more, honestly. It would make me want to be more honest, or it's an incentive, because I see your face. I see your reaction. It's definitely better than just talking on the phone. (ID 51, 19 years, Tampa)

However, given that the interview was about sexual behavior, some participants felt that others might feel embarrassed discussing such topics while seeing the face of the interviewer:

It is less personal on the phone but I don't know if that is a good thing or a bad thing...I think people, you know, might actually be comforted to talking to someone who is close to their age, who is asking more questions about how did it feel, you know like, it might be more like talking to a therapist or a psychologist and make people more comfortable with it. On the flip side like more people—people might be less comfortable with it because they are talking to someone who, you know, they can see is a person, you know—when it is on the phone it is really not as connected as looking at a person and seeing them in real time[...]. It might be a comfortable or familiar situation, but for people who aren't comfortable in that situation it might not be. Talking on the phone might be easier. (ID 06, 21 years, Tampa)

COMPARISON WITH IN-PERSON INTERVIEWS

Most of the respondents did not find any important difference between in-person interviews and interviews via VC:

It would have been the same [...] because [VC] is like you were in person. (ID 09, 23 years, San Juan)

It's pretty much like if you were in the office, so it's pretty much personable, like you can still talk and you know the person that you're speaking to, it's not like you're just typing to someone. (ID 49, 24 years, Pittsburgh)

TECHNICAL CONSIDERATIONS

Some participants complained about the time delay (latency) in the video transmission. Poor video quality and camera cut-offs were also somewhat bothersome. These issues sometimes led to communication problems, such as distraction from the interview:

Well, I don't know if it's this Web cam or your Web cam, but every time you move, it's like, I don't know how to explain it, it's like a really slow, funny—[so I don't know which Web cam it is, but it's probably one or both of them]. So I just actually don't really try to look directly at you, because it drives me nuts, because [like], when you start talking, it's like behind[...]. It's watching a show and like it's not quite in sync.... (ID 43, 23 years, Tampa)

Use of the phone to transmit the audio was felt as cumbersome. Some participants preferred using the Internet instead of the phone to transmit the audio:

I use Skype and we can just talk on the computer. I don't have to worry about holding the phone the whole time. I think that would be a little easier, a little more convenient. Then again, it's not a huge problem that I have, a big difficulty. (ID 51, 19 years, Tampa)

Discussion

Our experience with using VC technology indicated that it is a feasible way to conduct interviews about sexual behavior and microbicide use. VC was acceptable to the majority of participants who appreciated seeing the person with whom they were speaking and that the interview environment was private.

Nevertheless, the intimate nature of the interview concerned some participants because the interviewer could see them, an issue that often was expressed in reference to other potential participants, not themselves. This concern would still be present in face-to-face interviews; however, the advantage of VC is that it allows for the interviewer and the participant to be in two different locations, thereby increasing confidentiality. The potential discomfort and reluctance of participants to discuss sensitive topics can be counteracted by increasing their trust in the interviewer, as we sought to do by using a gender-matched interviewer of about the same age as the participants, holding an initial brief interview to establish rapport, and keeping the same interviewer throughout the study. Another possible way to alleviate this concern would be to transmit only the interviewer's video, so that the interviewer cannot see the participant. Despite potential concerns expressed by some participants, our research confirmed that participants found VC to be both private and confidential and that they were willing

to disclose sensitive information about sexual behavior and vaginal practices via VC.

As previously found,^{15–17} we observed that implementing VC allowed us to use a single, highly trained interviewer, along with close monitoring and centralized processing of information. As many microbicide candidates enter multicountry Phase 2 and 3 trials, these important advantages over in-person interviews could make VC particularly useful for conducting in-depth interviews in such trials.

Through the use of VC in our study, we identified technical disadvantages that can be easily addressed. We used VC plus phone because of Institutional Review Board requirements. However, encryption has evolved from the time we sought the Institutional Review Board approval. Other technical issues related to the connection speed are becoming irrelevant with advances in information technology development. Therefore, using a VC program in which video and voice are transmitted simultaneously at a rapid speed would resolve the technological problems noted by the participants.

Our study had several limitations. The demographics of the sample (young women, many of whom were very familiar with the use of computers and had college education) may limit the generalizability of our findings. Yet, as information technology tools become increasingly widespread and more people gain experience with them, our findings should become more generalizable. Another limitation is that we used VC, the same tool that we were evaluating, to assess participants' experiences with it. Future research may use another assessment method. In addition in the present study we did not use interview modalities other than VC. Instead, the participants were asked for a hypothetical comparison of how they might have felt differently if the interviews had been conducted in person or by phone only. This limited our ability to compare these approaches and to determine how VC affected the data collection process beyond each participant's reported perceptions.

In summary, our results indicate that (1) VC offers important advantages for conducting qualitative interviews about sensitive topics, (2) the few technological disadvantages that were identified can be easily resolved, and (3) overall, participants had favorable opinions of the technology. These findings are encouraging given that as information technology rapidly develops, VC will likely become an increasingly useful data collection tool in research.

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Disclosure Statement

No competing financial interests exist.

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