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Internet-Based Video-Group Delivery of Healthy Relationships— a “Prevention with Positives” Intervention: Report on a Single Group Pilot Test among Women Living with HIV

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Abstract

Women living with HIV (WLH) face challenges related to stigma, disclosure of HIV status, and negotiating safer sex. Several effective behavioral interventions, such as Healthy Relationships (HR), help WLH address these challenges and are disseminated by the U.S. Centers for Disease Control and Prevention's (CDC) Diffusion of Effective Behavioral Interventions (DEBI) project. However, many WLH living in poor urban or rural locations cannot access interventions such as HR, because implementation is not feasible. Video-conferencing technology holds promise for expanding access to effective behavioral interventions for WLH. Following a systematic adaptation to the video-conferencing format, this pilot study tested the delivery of HR via video-group (VG) among WLH. The video-conferencing based intervention, HR-VG, consisted of six, two-hour sessions led by two facilitators, and used structured activities and video-clips to build disclosure and safer sex skills. Four minority WLH received HR-VG at four different community-based intervention sites in a private room equipped with a video-phone (VP) for participating in HR-VG and a desktop computer for completing assessments via Audio Computer-Assisted Self Interview (ACASI). Participants completed a baseline assessment prior to HR-VG, and post-session assessment after each HR-VG session. The post-intervention assessment and video-focus group were completed following the last HR-VG session. Facilitators completed an assessment after each HR-VG session and an open-ended questionnaire following HR-VG. HR-VG was implemented in its entirety with minimal challenges. Both participants and facilitators reported feeling either “very comfortable” or “completely comfortable” with the technology and the overall intervention. Participants also reported high levels of unity and togetherness among the group. These preliminary findings suggest VG delivery of HR for WLH is both feasible and highly valued by participants. A follow-up randomized controlled trial is underway to test the feasibility and efficacy of HR-VG with a larger sample of WLH.

Keywords

HIV/AIDS; Behavioral interventions; Risk reduction; Prevention with Positives; Technology

Women and girls comprise 50% of those aged 15 years and older living with HIV (Global Health Council, 2010). Many struggle with stigma (Sandelowski, Lambe & Barroso, 2004), disclosure (Serovich, Craft, & Yoon, 2007) and meeting their sexual and reproductive desires while minimizing risks (Nattabai, Jianghong, Thompson, Orach, & Earnest, 2009; Ridge, Ziebland, Anderson, Williams, & Elford, 2007). Interventions that address these challenges are needed (Lyles et al., 2007; Office of National AIDS Policy, 2007)

The CDC Diffusion of Effective Behavioral Interventions (DEBI) project (Effective Interventions, n.d.) enhances communities' capacity to implement effective interventions, including Healthy Relationships (HR), which is delivered in groups using structured activities and video-clips to build skills for disclosure decision-making and safer sex (Kalichman, et al., 2001). Despite dissemination efforts, HR and other DEBI programs are unavailable to many women living with HIV (WLH) because they live in resource-poor or rural locations where implementation is not feasible because of limited funds and staff.

Delivering HR via video-conferencing (i.e., video-groups (VG)) could expand access. Group video-conferencing has been successfully used with HIV-uninfected populations (Collie et al., 2007; Glueckauf & Noël, 2011; Marziali & Donahue, 2006; Lounsberry, MacRae, Angen, Hoerber & Carlson, 2009). Video-conferencing interventions are usually accessible to many, easy to use, useful in reaching isolated groups, and stigma-reducing (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006). Previous focus group findings from 27 WLHs suggested many WLH may be amenable to receiving HR via VG if it is accessed in the community, not at home (Marhefka, Fuhrmann, Gilliam, Lopez, & Baldwin, 2011).

This paper presents results of a small single-group pilot test of VG delivery of HR (HR-VG) to WLH, focusing on overall satisfaction and participants' and facilitators' experiences with technological aspects of the intervention.

Methods

Participant Recruitment and Eligibility

Participants were recruited by study staff and community agency partners. WLH were eligible if they were 18 years old; agreed to attend five of the six HR-VG sessions; and provided documentation of HIV status. We aimed to include at least one WLH who completed HR previously, to compare the quality of HR-VG versus HR in-person. A group-based, virtual informed consent process was employed.

Intervention delivery

Based on previous findings (Marhefka et al., 2011), HR-VG was delivered via video-phone (VP; Cisco IP VP E20, 2012). The E20 connected to the Internet through an Ethernet port and displayed all participant and facilitator faces simultaneously. At times, the full screen was used to display video-clips and a "virtual white board" (i.e., a word processor displaying information). Each E20 was located within a healthcare-related community organization in a private room with a table/desk, chair, computer with headset, and a dedicated Internet line to ensure quality and security of video transmission (Figure 1). A staff member at each site was trained as a study liaison (SL) to communicate needs for technical support and distribute research incentives. During sessions, SLs used an instant messaging (IM) system to communicate with study staff.

Two facilitators led HR-VG with a more complex VP unit, the Cisco Telepresence Quick Set C20 (2012; Figure 2). During sessions, facilitators managed the VP, a computer connected to the C20 for the virtual white board, and another computer connected to a

projector to display video-clips. The lead facilitator, who held a Master's degree in social work, operated the VP unit because the co-facilitator, an HIV-positive peer educator, was less comfortable doing so. A technical support staff member remotely monitored transmissions and provided assistance. An independent intervention manager was in the facilitator room during each session and used IM to communicate with SLs.

The intervention consisted of six two-hour sessions held three days a week for two weeks. The first session included an introduction to video-conferencing technology. Otherwise, the intervention was similar to HR in-person (see Kalichman et al., 2001). Participants received bus passes and a maximum of \$220 in gift cards, depending on number of sessions and assessments completed.

Assessments

All quantitative assessments were administered via Audio Computer-Assisted Self Interview (ACASI; Table 1). Six post-session assessments were administered. A post-intervention assessment was administered following the final session, preceded by a focus group discussion (FGD). Facilitators completed post-session assessments, as well as an open-ended questionnaire regarding their experience facilitating the group after the pilot test was completed.

Data Analysis

Quantitative data were analyzed using descriptive statistics in SPSS 20 (IBM Corp, 2011). Qualitative data obtained from the FGD transcript and facilitators' post-intervention questionnaire were summarized and analyzed separately by three authors (SI, SM, and HF) using a debriefing process (Guest, MacQueen, & Namey, 2011). Themes were discussed and agreed upon. One author wrote the qualitative results (SI); subsequently, the other authors involved in the analyses discussed and revised the document until consensus was reached.

Results

Participants' Experiences

See Tables 1-4 for participant characteristics and evaluations of HR-VG. Additionally, during the FGD, participants reported the VP was convenient and easy to use. One participant said, "I was excited because it [participating in a VG] was something I never did before.... It was a learning experience for me." One participant said it was similar to face-to-face participation "...we did the same thing we would have did sitting face-to-face with people." During the FGD, participants reported transitions from one activity to another went smoothly.

During FGD, all participants said they would choose HR-VG over HR in-person. One participant stated HR-VG prevented distracting "side conversations" with other participants. Another participant enjoyed HR-VG because "everybody had a chance [to speak]...." All participants said their participation was beneficial.

Facilitators' Experiences

See Table 5 for findings regarding facilitator experiences. One facilitator was "surprised at how quickly participants adapted to using the VP and how comfortable participants were in sharing and interacting during the session." The lead facilitator said she adapted quickly to video-group facilitation. However, facilitators did experience challenges, including the complexity of managing the equipment during the groups and the inability to connect with participants privately. They also disliked the limited ability to see and read body language on the VP, because only participants' faces were shown.

Discussion

To our knowledge, this study is the first to report delivering any HIV-related intervention via VG. VG delivery did not appear to affect the core elements (Kalichman et al., 2001) of HR. Although most participants had never used VPs prior to HR-VG, all participants found the VP convenient to use, felt comfortable using it, and would recommend HR-VG to others, consistent with previous research (Collie et al, 2007; Lounsberry et al., 2009; Skrajner et al., 2009). Glueckauf et al. (2002) and Morgan, Patrick, & Magaletta (2008) also found that technology did not prevent participants from expressing themselves or experiencing group unity and togetherness. The three people who had participated in HR in-person reported HR-VG was similar. Moreover, all participants reported they would choose HR-VG over HR in-person, which they attributed to increased attention and equitable participation among group members. Facilitators had mostly positive experiences with HR-VG, as well.

Several challenges were identified. One facilitator was uncomfortable with the equipment. This could be addressed by: a) simplifying the equipment; b) providing additional training and practice; and/or c) hiring only facilitators who are comfortable with the equipment. Facilitators wanted to be able to speak privately with group members, which could be arranged via telephone. Other challenges included occasional transmission interruptions and video pixilation—issues that can be addressed with education and improvements in technology (see Glueckauf & Loomis, 2003; Starling & Foley, 2006). Nevertheless, because some technical issues are inevitable, it will be important to maintain good communication among all staff (see Morgan et al., 2008; Richardson et al., 2009).

The main limitation of this study is the single-group design ($N=4$). The three participants who previously had completed HR in-person were able to compare HR-VG to in-person HR, but it will be important to learn more about HR-VG experiences of HR-unexposed women. Participants were African-American and Latino only; further studies with greater ethnic diversity will be needed. Participating agencies were in urban areas. Testing in rural areas will be important for understanding acceptability among WLH in those areas. No data were collected on actual behavior change. Such data will be necessary for determining the efficacy of HR-VG.

The costs of employing this strategy in the “real world” are not yet fully known. Each E20 unit was approximately \$1,100 plus \$175 for a compatible headset. A dedicated Internet line ranged from \$68-120/month. Costs for a part-time staff person to oversee the intervention sites are currently unknown, but should be assessed. Additional research will be important for determining the costs of implementing this dissemination strategy.

Findings suggest delivery of HIV-related interventions via VG may be feasible and well received by WLH. A small randomized controlled trial is underway to further test the feasibility, acceptability and preliminary efficacy of HR-VG among WLH for increasing safer sexual practices and increasing disclosure decision-making skills. If such efforts are successful, VPs and other video-enabled technologies may become important mechanisms for delivering effective HIV prevention interventions and other health promotion interventions to people throughout the U.S.

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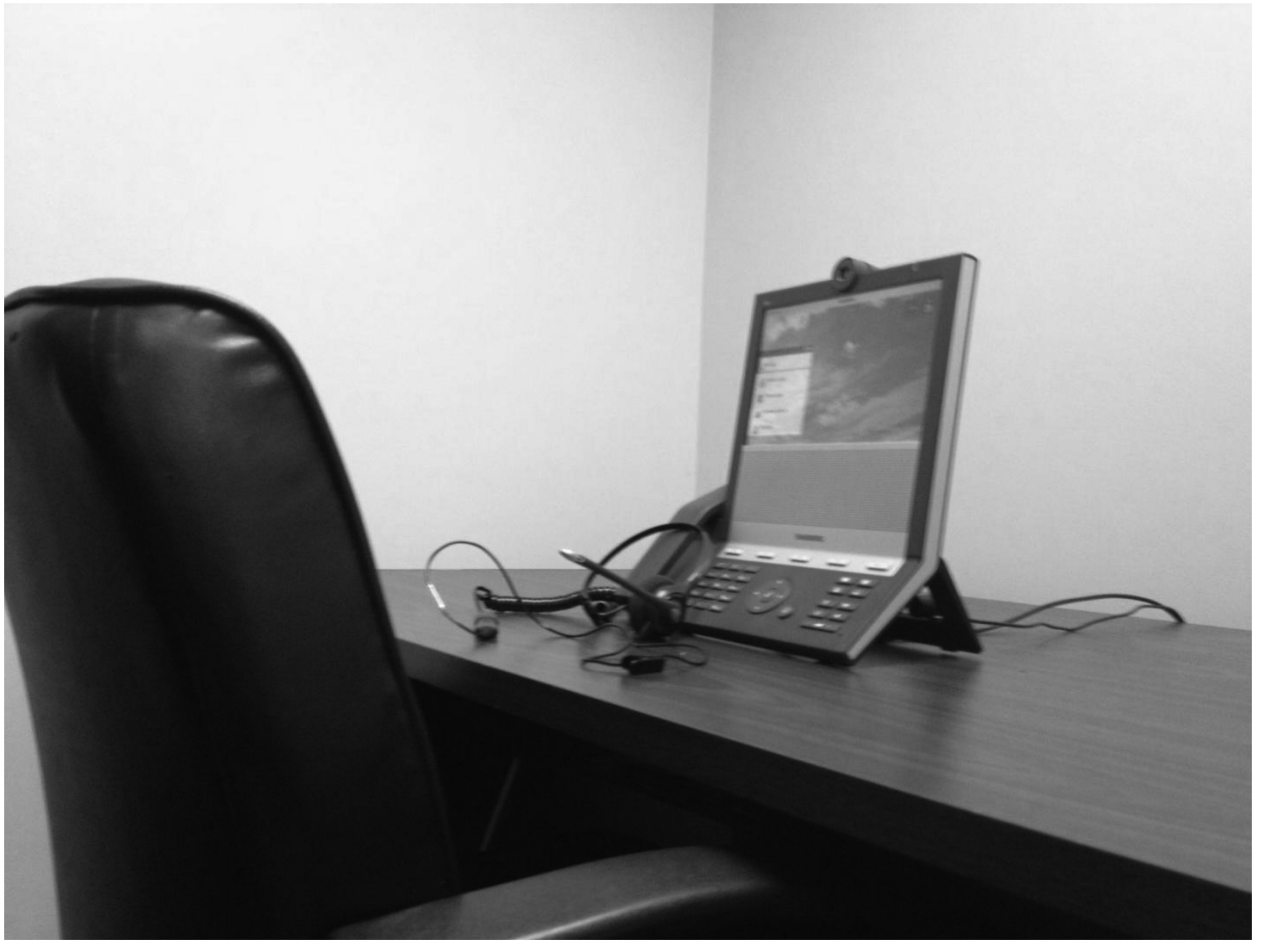


Fig. 1.
Video-phone at community-based intervention station.



Fig 2.
Facilitator Station

TABLE 1

Key Characteristics of Participants at Baseline

Characteristics	N = 4
Age (Median years)	42 (range = 25-54)
Race	
Hispanic	1
African American	3
Employment	
Not employed for pay	1
On disability	3
Socio-Economic Status	
I get enough to eat	3
I sometimes do not get enough to eat	1
Number of partners in the last 3 months	
None	1
One	3
Disclosed to current partner (yes)	3*
Aware of partner's HIV serostatus (yes)	3*
Previously completed Healthy Relationships in person	3

* Total N=3; 1 participant did not have a current partner

TABLE 2

Participants' Computer Use and Comfort at Baseline

Use and Comfort	N = 4
Overall, how comfortable are you with using a computer? ^a	
Comfortable	3
Very comfortable	1
How often do you use the Internet and/send and receive email? ^b	
Daily/almost daily	1
At least once every 2 weeks	1
Less than once every 2 weeks	1
Never	1
Imagine yourself in a private soundproof room, using a video-phone. How comfortable would you be talking with a group of people who have HIV? ^a	
Comfortable	2
Very comfortable	2

^aOther response options included "very uncomfortable" and "uncomfortable."

^bQuestion adapted from PEW Internet and American Life Project (n.d.)

TABLE 3

Participants' Experiences with Healthy-Relationships Video-Group (VR-VG; N=4)

	Good	Excellent
How would you rate the quality of the HR-VG program? ^b	1	3
How would you rate the quality of the images of the participants? ^b	1	3
How would you rate the quality of sound? ^b	0	4
	Most of my needs have been met	Almost all of my needs have been met
To what extent did HR-VG meet your needs for support? ^c	1	3
To what extent did HR-VG meet your needs for learning about safer sex? ^c	0	4
To what extent did HR-VG meet your needs for learning skills about disclosure? ^c	2	2
To what extent did HR-VG meet your needs for learning condom use? ^c	1	3
	Agree	Strongly agree
There is unity and togetherness among group members. ^d	2	2
Group members feel free to share information. ^d	2	2
	Mostly satisfied	Very satisfied
How satisfied were you with the amount of support you received through HR? ^e	0	4
	Yes, generally	Yes, definitely
Did you get the kind of support you wanted? ^f	0	4
If a friend were in need of similar help, would you recommend HR to her? ^f	0	4

^aQuestions were derived from Attkisson and Zwick (1982) and Treadwell et al. (2001).

^bOther response options were "Poor" and "Fair."

^cOther response options were "None of my needs have been met" and "Only a few of my needs have been met."

^dOther response options were "Strongly disagree" and "Disagree."

^eOther response options were "Quite dissatisfied" and "Indifferent or mildly satisfied."

^fOther response options were "No, definitely not" and "No, not really."

TABLE 4

Participant Comfort across Sessions^a (N=4)

	S1	S2 ^b	S3	S4	S5	S6
How comfortable were you expressing thoughts/feelings?						
Very comfortable	1	2	1	2	2	2
Completely comfortable	3	0	3	2	2	2
How comfortable did you feel speaking with group?						
Very comfortable	1	0	2	2	3	1
Completely comfortable	3	2	2	2	1	3
How comfortable did your group members seem to be?						
Very comfortable	0	1	2	2	3	2
Completely comfortable	4	1	2	2	1	2
How comfortable did you feel overall?						
Very comfortable	1	1	2	1	2	1
Completely comfortable	3	1	2	3	2	3
How comfortable did you feel speaking with facilitators?						
Very comfortable	1	2	2	1	3	2
Completely comfortable	3	0	2	3	1	2
How comfortable did the facilitators seem?						
Very comfortable	2	1	2	2	3	2
Completely comfortable	2	1	2	2	1	2

^a Questions modified from the Audiovisual Equipment Rating Scale (AVERS; Glueckauf et al., 2002). Response options ranged from "Not at all comfortable" to "Completely comfortable" on a 5-point scale.

^b Only 2 participants attended session 2 due to previous commitments.

TABLE 5

Facilitator Comfort across Sessions* (N=2)

	S1	S2	S3	S4	S5	S6
How comfortable did you feel speaking with group?						
Very comfortable	1	2	2	1	0	0
Completely comfortable	1	0	0	1	2	1
How comfortable did you feel speaking with each other?						
Somewhat comfortable	2	1	0	0	0	0
Very comfortable	0	1	2	1	1	1
Completely comfortable	0	0	0	1	1	0
How comfortable did you feel overall?						
Somewhat comfortable	2	0	0	0	0	0
Very comfortable	0	2	1	0	1	0
Completely comfortable	0	0	1	2	1	1
How comfortable did group members seem?						
Very comfortable	2	2	2	2	1	0
Completely comfortable	0	0	0	0	1	1

* Questions modified from the Audiovisual Equipment Rating Scale, Facilitator Version (AVERS; Gluckauf et al., 2002). Response options ranged from “Not at all comfortable” to “Completely comfortable” on a 5-point scale.