HHS Public Access

Author manuscript

Psychol Violence. Author manuscript; available in PMC 2017 July 01.

Published in final edited form as:

Psychol Violence. 2016 July ; 6(3): 469–477. doi:10.1037/vio0000042.

Adapting an Evidence-Based HIV-Prevention Intervention for Women in Domestic Violence Shelters

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Abstract

Objective—Despite the documented intersection of intimate partner violence and HIV, there is a paucity of evidence-based HIV prevention interventions for female survivors of intimate partner violence in the United States. This paper describes the adaptation of an effective HIV prevention intervention, Sisters Informing Sisters about Topics on AIDS (SISTA), for women in domestic violence shelters and the steps taken to improve the adapted intervention's implementation.

Method—The adaptation process was guided by the ADAPT-ITT framework and data collected from directors, direct client service providers, and residents of two domestic violence shelters located in urban areas, as well as topical experts.

Results—Eleven of 12 shelter staff (92%) reported that HIV interventions had never been implemented at their shelter and 64% reported they had not provided residents with educational brochures about HIV prevention. Changes made to adapt SISTA for this population and enhance the implementation of the intervention included reducing the intervention's duration; adding education about the intersection of intimate partner violence, substance use, and HIV; and adding an HIV risk assessment and safety plan.

Conclusions—Next steps will include implementing the adapted intervention and evaluating its perceived acceptability and efficacy, and assessing whether contextual factors influence the intervention's implementation.

Keywords

Intimate partner violence; HIV; sexual risk behavior; women; domestic violence

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This study was presented at the 2015 Society for Prevention Research Conference in Washington, DC.

Women who are abused by an intimate partner are at greater risk for contracting HIV because of both risky sexual and injection drug use behaviors; they are also at greater risk for contracting HIV because of forced or coerced sexual violence (including forced anal and vaginal sex) by a male intimate partner (Campbell & Soeken, 1999; Cavanaugh, Hansen, & Sullivan, 2010; Cavanaugh et al., 2014; El-Bassel, Gilbert, Witte, Wu, & Chang, 2011; Li et al., 2014; Maman, Campbell, Sweat, & Gielen, 2000). Male perpetrators of intimate partner violence (IPV) have been found to engage in riskier sexual behaviors than their non-abusive counterparts (El-Bassel et al., 2001; Frye et al., 2011; Raj et al., 2006), which increases the likelihood that these men may contract HIV and infect their female partners. The multiple ongoing nature of sexual contacts with an abusive partner and increased rates of sexually transmitted diseases in abused women contribute to abused women's increased risk for contracting HIV (Campbell, Lucea, Stockman, & Draughon, 2013). Since the majority of women who contract HIV in the United States do so through high-risk heterosexual contact (CDC, 2015), evidence based interventions that reduce risky sexual behavior have been identified as HIV prevention interventions. This study describes the adaptation of an evidence-based intervention (EBI) for reducing HIV sexual risk for women in domestic violence (DV) shelters and the steps taken to improve the implementation of the adapted intervention.

Alcohol and drug use contribute to abused women's risk for contracting HIV. IPV victimization has been associated with women's increased risk for injecting drugs and having a partner who injects drugs (Decker et al., 2014). Women who experience IPV may use and abuse alcohol and drugs to cope with the negative sequelae of IPV (Gilbert, El-Bassel, Rajah, Foleno, & Frye, 2001; Kaysen et al., 2007). Substance use has been associated with decreased condom use (Bauer et al., 2002) and subsequent sexual violence from an intimate partner (Testa, VanZile-Tamsen, & Livingston, 2007). Unprotected sex occurring in the context of substance use, particularly forced unprotected anal sex, and receptive syringe sharing with a partner who is infected with HIV may lead to abused women contracting HIV.

Despite calls for EBIs for reducing HIV risk among female survivors of IPV (Gielen et al., 2007; The White House Interagency Federal Working Group Report, 2013), we are aware of only one HIV prevention intervention for abused women (Rountree & Mulraney, 2010; Rountree, Zibalese-Crawford, & Evans, 2012). That eighteen hour intervention improved HIV knowledge and decreased substance use among heterosexual, African American women who were recruited from a DV shelter (Rountree & Mulraney, 2010; Rountree et al., 2012). However, the 54% drop out rate for women in this intervention (Rountree, Bagwell, Theall, McElhaney, & Brown, 2014) suggests the need for shorter interventions for abused women. Another intervention for women in family planning clinics was shown to reduce HIV risk behavior in abused women in a subgroup analysis (Melendez, Hoffman, Exner, Leu, & Ehrhardt, 2003).

Many EBIs are poorly implemented into practice and fail to have a significant public health impact (Glasgow, Eckstein, & Elzarrad, 2013; Glasgow et al., 2012; Kelly et al., 2000; Lambdin et al., 2015). In order to address the gap between science and practice, scholars from the emerging field of dissemination and implementation science have recommended

adapting EBIs for high-risk populations (e.g., abused women), involving those who would implement or receive the EBIs in the adaptation process, and understanding contextual factors that may influence the implementation, dissemination, and sustainability of interventions (Glasgow et al., 2013; Kelly et al., 2000; Lambdin et al., 2015). EBIs for reducing HIV risk must be widely disseminated and implemented in order to have a significant public health impact (Glasgow et al., 2013; Kelly et al., 2000). Thus, there have been recommendations to consider dissemination from the outset of intervention planning and identify large community-based service systems where interventions may be delivered (Glasgow et al., 2013; Lambdin et al., 2015).

Since DV shelters are located in every state and serve thousands of adult victims of IPV daily (National Network to End Domestic Violence, 2013), these facilities are ideal for adopting and implementing HIV prevention interventions for abused women. Yet, DV shelters appear to have rarely participated in HIV prevention for women who are abused by intimate partners despite 86% of shelter personnel reporting that they felt HIV/AIDS prevention programs could be effective for these women (Rountree, Goldbach, Bent-Goodley, & Bagwell, 2011; Rountree, Pomeroy, & Marsiglia, 2008). While feminism has played an important role in the creation of DV shelters (Reinelt, 1995), conflicting strains of feminist thinking about sex may explain the underutilization of shelters in HIV prevention. For example, sex positive feminists have promoted sex education, reproductive rights, and provided roots for the HIV movement while radical feminists have promoted opposition to pornography, sex education, and contraception, and provided roots for the DV movement (MacKinnon, 1989; Rubin, 1998).

One EBI for reducing HIV risk to consider adapting for women in DV shelters is Sisters Informing Sisters about Topics on AIDS (SISTA: DiClemente & Wingood, 1995). SISTA is a community based HIV sexual risk reduction intervention for young African American women. The intervention, which was informed by social cognitive theory (Bandura, 1994) and the theory of gender and power (Connell, 1987), consists of 5, 2-hour sessions. Sessions focus on gender and ethnic pride, HIV risk reduction information, sexual assertiveness and communication training, how to use condoms properly and condom use norm promotion, and coping skills. The efficacy of the intervention was tested among 128 heterosexual, African American women and results revealed that when compared to a delayed HIV education control condition, women assigned to the SISTA intervention (80% of which completed at least four sessions), had 1.8–4.1 greater odds of demonstrating increased consistent condom use, sexual self-control, sexual communication, and sexual assertiveness (DiClemente & Wingood, 1995).

SISTA has been widely disseminated (Collins, Harshbarger, Sawyer, & Hamdallah, 2006) and implemented in community based organizations serving African American women at risk for contracting HIV (Prather et al., 2006; Sapiano et al., 2013). SISTA has been adapted for women in South Africa (Saleh-Onoya et al., 2008; Wingood, Reddy, et al., 2013), African American women who attend church (Wingood, Robinson, et al., 2013; Wingood, Simpson-Robinson, Braxton, & Raiford, 2011), and Latinas (Wingood, DiClemente, et al., 2011). SISTA elements have also informed other interventions including one for women

living with HIV aimed to prevent their spreading HIV to others (Wingood & DiClemente, 2006; Wingood et al., 2004).

This study adapted SISTA for women in DV shelters by completing three primary aims. The first aim was to conduct a needs assessment for an HIV prevention intervention for women in DV shelters. The second aim was to obtain feedback from key stakeholders and topical experts on how to adapt SISTA for women in DV shelters and use that feedback to adapt SISTA for women in DV shelters. The third aim was to assess shelter resources for the adapted intervention and directors' satisfaction with changes made to adapt SISTA for women in DV shelters.

Methods

This adaptation was guided by the ADAPT-ITT framework (Wingood & DiClemente, 2008), which has been used to adapt HIV prevention EBIs for other populations (Saleh-Onoya et al., 2008; Wingood, Reddy, et al., 2013; Wingood, Simpson-Robinson, et al., 2011). The first six steps of the ADAPT-ITT framework were used to adapt SISTA for women in DV shelters (see Table 1). We describe three specific aims that were achieved through these first six steps of the ADAPT-ITT framework. Two DV shelters; located in urban areas in two of the top ten states with high rates of HIV (CDC, 2014) and serving ethnically diverse women; were asked to participate in this NIH-funded pilot project which aimed to adapt SISTA for women in DV shelters, examine the fidelity of the adapted SISTA intervention, examine individual- and organizational-level factors influencing the implementation of the adapted intervention, and assess shelter staff and residents' perceptions about the adapted intervention's acceptability and efficacy. Both shelters were familiar with SISTA and agreed to participate in this project. Given the sensitive nature of some of the data collected, the shelters will remain anonymous.

Participants, Procedures & Measures

Aim/Sample 1—The first study aim was to assess the need for HIV prevention interventions in DV shelters and this aim was completed during the first step of the ADAPT-ITT framework. After receiving IRB approval from the appropriate institution, individual, in-person interviews were conducted with shelter directors and social workers who provide direct client services. These interviews assessed both the need for HIV prevention interventions in DV shelters and individual- and organizational-factors that may influence the adapted intervention's implementation. The individual- and organizational- level factors will be described in detail in a forth-coming article about the adapted intervention's implementation and are therefore not described in this article. Fourteen DV shelter directors and social workers were asked to complete these interviews and 11 interviews were completed. One interview was partially completed. Participants signed informed consent forms and the shelters were remunerated $40 for each employee who completed the interview. The following three questions were developed and used to assess the need for HIV prevention in DV shelters: 1) Have you ever implemented an HIV prevention intervention in your shelter, 2) Do you currently have HIV prevention services at your shelter, and 3) Do

you provide shelter residents with educational brochures about HIV prevention? These questions had “yes/no” response options.

Aim/Sample 2—The second study aim was to obtain feedback from key stakeholders on how to adapt SISTA for women in DV shelters and use that feedback to adapt SISTA for women in DV shelters. This aim was completed during steps 3–6 of the ADAPT-ITT framework. Nine shelter directors/administrators (n=6 from shelter 1), 9 direct client service providers who would be responsible for delivering the adapted intervention in the future (n=3 from shelter 1), and 10 residents (n=5 from each shelter) participated in a four hour theater test, where they were shown exercises from the original SISTA intervention and asked whether those activities should be kept the same, deleted, or modified for the new target population. Fliers were posted within the shelters to inform interested residents about the theater test. The shelters were remunerated $80 for each shelter director and $68 for each direct client service provider who participated in the theater test. Shelter residents who participated in the theater test received a $60 visa gift card. One shelter provided child care for residents with children.

A trainer with experience in delivering SISTA demonstrated exercises from sessions 1, 2, and 4 of the original SISTA intervention, which focused on gender and ethnic pride, HIV risk- reduction information, and condom skill building and norm promotion. After each exercise was shown, participants were asked to complete the Adaptation Evaluation form (Windgood & DiClemente, n.d.). The adaptation evaluation form (see Appendix) consists of four questions that ask about whether 1) to keep the wording of the activities and materials the same, 2) to delete the activity, 3) to adapt the activity, and 4) more significant adaptations to the activity are needed. Response options included both close-ended (i.e., yes/no) and open-ended response options. These questionnaires were anonymous and prohibited us from distinguishing between responses from shelter workers versus residents. During the theater test, the first author also asked participants informally to report the total time they felt was feasible for the adapted intervention and direct client service providers were asked to indicate whether they would feel comfortable delivering the exercises shown. Lastly, participants were briefly informed about the content of sessions 3 and 5 of SISTA, which focus on sexual assertiveness and communication, and coping skills and were asked as a group about whether they thought those sessions should be retained in the adapted intervention even though they did not see the actual exercises due to time restrictions.

Topical experts (i.e., Gina Wingood and Jacquelyn Campbell) provided feedback before and after the theater tests about which exercises from SISTA should be administered during the theater test and how SISTA should be adapted for women in the shelters. They suggested including safety planning, an HIV risk assessment, and information about financial empowerment in the adapted intervention. Based upon the feedback from these topical experts, participants in the theater test, and the extant literature; a plan was developed for how to adapt SISTA for women in DV shelters, and changes were made in the intervention manual.

Aim/Sample 3—The third study aim was to assess shelter resources for the adapted intervention and directors’ satisfaction with changes made to adapt SISTA for women in DV

shelters. This aim was completed during step six in the ADAPT-ITT framework. Six semi-structured interviews were completed with DV shelter directors to discuss the adaptation plan, assess shelter resources for the adapted intervention, and assess shelter directors' satisfaction with changes made to adapt SISTA for women in DV shelters. These interviews took less than an hour to complete and each shelter was reimbursed $100 for the shelter directors' participation.

A questionnaire was developed that consisted of open-ended questions that asked about whether two, three-hour intervention sessions would be feasible for staff to deliver and residents to attend, the availability of childcare resources for shelter residents with children, suggestions for poems aimed to enhance the pride of survivors of IPV, the availability of resources (e.g., internet access and video equipment) to deliver video demonstrations of condom use, and familiarity with two financial literacy programs being considered for inclusion in the adapted intervention. This questionnaire also included five close-ended questions that asked directors to report their satisfaction with the following adaptations: 1) a poem that was included in the adapted intervention to enhance survivor pride, 2) modifications of an activity to be inclusive of women of all ethnic backgrounds, 3) modifications of an activity so that fear of violence is addressed as a potential barrier to non-condom use, 4) expanded information about the female condom (i.e., limited availability and reports of increased violence for some women that have tried to use it with abusive partners), and 5) providing participants with financial literacy/education at the end of the adapted SISTA intervention which shelter staff would review in greater detail after the intervention. These five questions were rated on a Likert scale that ranged from 1, indicating "not at all satisfied" to 5, indicating "highly satisfied." Coefficient alpha for these five items was .77.

Data analyses

Descriptive statistics were used to describe 1) the results from the needs assessment for HIV prevention interventions in the DV shelters, 2) responses to close-ended questions from the adaptation evaluation form administered during the theater test, and 3) the means and standard deviations for questions assessing directors' satisfaction with the changes made to adapt SISTA for women in DV shelters. The first and fourth authors completed a qualitative description of the responses to open-ended questions on the adaptation evaluation form through content analyses (Sandelowski, 2000). Both researchers summarized all of the suggested modifications and documented the frequency of theater test participants suggesting the same modifications.

Results

Table 2 shows the results from our first study aim involving the assessment for HIV prevention services within DV shelters. As shown, 92% (n=11) of the twelve staff members reported that HIV interventions had never been implemented at their shelter. The two participating shelters differed with respect to the prevalence of staff who had reportedly provided their clients with educational brochures about HIV prevention [60% (n=3) vs. 17% (n=1)].

A second study aim involved obtaining feedback from key stakeholders about whether to retain, modify or delete SISTA activities for women in DV shelters and to use that data to adapt SISTA for women in DV shelters. Table 3 summarizes data obtained from the Adaptation Evaluation form including responses to close-ended questions about whether activities should remain unchanged and be retained as well as examples of suggested modifications obtained from the open-ended question. As shown, a majority of the theater test participants recommended that the materials from the original SISTA exercises be kept the same when delivered to women in DV shelters. Some recommended facilitators discuss women's safety options if their partners are not monogamous or if partners force sex or injection drug use, and to include a discussion of harm reduction strategies. Only two participants recommended any of the SISTA exercises demonstrated be removed, both for the same activity. Although not shown in Table 3, several stake-holders suggested similar modifications with the most common being to modify activities to be inclusive to women of different ethnicities (n=10), address power and control issues with IPV survivors along with HIV risk behaviors occurring as a result of threats or nonconsensual activities (n=5), and include survivors of IPV as examples of strong women (n=4).

During the theater test, the first author recorded observations. Participants spontaneously took notes and expressed gratitude for what that they had learned. Several residents asked for condoms and other materials covered in the demonstrations. One shelter resident disclosed that she recently learned she was HIV positive and that the information she learned during the theater test was beneficial for her. At the end of the theater test, the first author informally asked theater test participants to identify the total duration of the intervention they thought would be feasible. The majority appeared to agree that the total duration for the adapted intervention not exceed six hours and that the intervention either consist of 2, 3-hour sessions or 3, 2-hour sessions. The former was chosen as it appeared to be more feasible and is consistent with the administration time of other successful adaptations of SISTA.

Table 4 shows the adaptation plan that was developed and used to revise the SISTA implementation manual (Midwest Prevention Intervention Center of the African American Prevention Intervention Network & CDC, 2008) that will be used by case managers to implement the adapted intervention to women in DV shelters. The following modifications were made to adapt SISTA for women in the shelters: 1) added activities to enhance IPV survivor pride, 2) removed exclusive focus on African American women, 3) expanded HIV education to include discussion of IPV related risk factors, 4) expanded an activity that asks women to identify levels of risk for contracting HIV to include an example of women being pressured into sex by partner, 5) added discussion of barriers to using condoms with abusive partners, 6) replaced in-person condom demonstrations with video demonstrations since facilitators expressed discomfort with doing in-person demonstrations, 7) included discussion of the female condom, including potential risk of violence and its limited availability, 8) included an HIV risk assessment and safety plan, 9) added discussion about women's concerns about using assertive communication with abusive partners and safety planning, 10) expanded education about alcohol use and HIV to discussion about the intersection of IPV, substance use and other mental health problems, and HIV, and 11) included information about financial planning.

The brief HIV risk assessment and safety plan developed for the adapted intervention (Cavanaugh, Harvey, Alexander, & Campbell, in preparation) asks women to identify whether they have engaged in specific HIV risk behaviors by choice or because they were forced, coerced, or pressured into doing by abusive partners. Since some mental health problems (e.g., posttraumatic stress) are common among survivors of IPV (Golding, 1999), and positively associated with HIV risk behaviors (Cavanaugh et al., 2010), the HIV risk assessment also includes screen questions for associated mental health problems. A list of harm reduction strategies are given for both consensual and non-consensual HIV risk behaviors (e.g., safety planning, pre-exposure prophylaxis or PrEP, and post-exposure prophylaxis or PEP). Respondents are asked to consider mental health treatment if indicated since improving mental health may reduce HIV risk behaviors. Also, women are given information about local harm reduction service providers (e.g., places providing condoms, needle exchange programs, methadone maintenance programs).

The third study aim involved assessing shelter resources for the adapted intervention and directors' satisfaction with changes made to adapt SISTA for women in DV shelters. Results from the interviews with the six shelter directors about the changes made to adapt SISTA for women in DV shelters indicated that the majority of them (83%; n=5) felt that the shortened intervention time of 6 hours was feasible for both shelter staff and shelter residents. Both shelters reported having childcare resources available for interested residents with children. Furthermore, the directors reported that the shelters provided residents with financial literacy information. However, they still felt that including financial literacy information at the end of the adapted intervention would be beneficial and feasible. The six shelter directors reported satisfaction about changes made to adapt SISTA for women in DV shelters with reported means for the five related questions ranging from 4.0 (satisfied) to 4.8 (5=highly satisfied; SD= .41–.63 on a 1–5 Likert scale). The two sessions from the adapted intervention are briefly described below.

Session 1: Pride, HIV/AIDS Education, Behavioral Self-Management Training

The first session focuses on enhancing pride, HIV/AIDS education, and behavioral self-management training. The session begins with a poem aimed to foster pride among survivors of IPV; setting rules for participants to follow during the SISTA sessions; and exercises aimed to foster gender, ethnic, and survivor pride. Participants are provided with information about HIV, the unique HIV risk factors related to IPV, and condoms. Participants observe videos demonstrating proper condom use and practice using condoms. Also, participants complete an HIV risk assessment and safety plan. The session ends with a poem aimed to foster gender pride and participants are asked to evaluate and provide feedback on the session.

Session 2: Assertiveness Training and Coping Skills

Session 2 focuses on assertiveness training and coping skills. This session begins and ends with poems aimed to foster survivor and gender pride. Participants discuss assertive, passive, and aggressive communication and practice assertive sexual negotiation. They also discuss concerns about whether using these strategies with their partners may result in IPV and review HIV and IPV safety planning. Participants receive information about effective coping

strategies, how substance use may increase their risk for experiencing IPV and contracting HIV, and financial literacy and empowerment. Participants evaluate the session at the end.

Discussion

The first study aim involved conducting a needs assessment for HIV prevention services within DV shelters. Ninety-two percent of the DV shelter workers reported that HIV prevention interventions had never been implemented at their shelter and educational brochures about HIV prevention were rarely provided to residents. These findings are consistent with other reports that DV shelters are underutilized in HIV prevention (Rountree et al., 2011; Rountree et al., 2008).

The second study aim was to obtain and use feedback from key stakeholders to adapt SISTA for women in DV shelters. This feedback resulted in several changes including the addition of the following: poems to enhance the pride of survivors of IPV, information about the intersection of IPV, substance use and mental health problems, and HIV; and an HIV risk assessment and safety plan. The third study aim involved assessing directors' satisfaction with changes made to adapt SISTA for women in DV shelters. A high degree of satisfaction with the adaptations made to SISTA for women in DV shelters was reported among the shelter directors.

In addition to involving key stakeholders in the adaptation process, several other steps were taken to enhance the dissemination and implementation of the adapted intervention. The following were assessed: the shelters' resources for delivering the intervention (e.g., childcare for residents, ability to provide residents with financial literacy information, and time available for staff to administer the adapted intervention), the intervention recipients' access to strategies recommended in the intervention (e.g., female condoms), and contextual factors that may influence the implementation of the intervention (e.g., the shelters organizational culture and the social networks of staff). The duration of the intervention was reduced from 10 hours to six. In order to address facilitator concerns, in-person condom demonstrations were replaced with video demonstrations, which have been shown to be effective in modifying health behaviors including use of the female condom (Tuong, Larsen, & Armstrong, 2014). Also, a systematic evaluation of the availability of the female condom was undertaken since the availability of this product affects whether recipients would have access to this product after the intervention trial ends and whether prevention strategies that promote use of the female condom are sustainable (Cavanaugh, Mial, & Tulloch, 2016). Given the poor availability of this product, information of such was included in the intervention and enthusiastic promotion of the product in the intervention was tempered.

Limitations

The study limitations warrant consideration. The adapted intervention has not been evaluated so its efficacy for reducing HIV risk is unknown. Since key stakeholders from the shelters did not observe all of the SISTA intervention activities due to time constraints, they were unable to give detailed feedback about sexual assertiveness and coping activities. Also, it was not feasible to address all of the theater participants suggested modifications (e.g., expanding the focus to pre-teens). Also, this pilot study was based upon a small sample (n

=12–28). Women in DV shelters are a heterogeneous population with different needs, so future modifications of the adapted SISTA intervention may be needed for different subpopulations of women within DV shelters. Finally, while the adapted intervention informs women about the use of pre- and post-exposure prophylaxis in reducing HIV risk, low-income and uninsured women may face barriers to accessing these strategies (Horberg & Raymond, 2013).

Research and Clinical Implications

Next, the final steps of the ADAPT-ITT model (Wingood & DiClemente, 2008), which involve training shelter staff on the adapted intervention and having them deliver it to the residents, will be completed. During the intervention implementation; the intervention fidelity, acceptability and perceived efficacy will be assessed. Trainer-level (e.g., knowledge, attitudes, and social networks) and organizational-level (e.g., culture and climate) factors affecting the implementation of the intervention will be examined. The aim is to evaluate the adapted intervention in a randomized controlled trial and assess long-term outcomes once women leave the shelters. If the adapted intervention is found to be effective in reducing HIV risk among abused women, efforts will be made to disseminate and implement the intervention at other DV shelters. Since shelters serve a substantial number of women who experience IPV each year, an EBI for reducing HIV risk that is delivered widely at DV shelters could have a substantial public health impact on reducing HIV risk among abused women.

Many women in violent relationships, including those that seek shelter, may remain in a violent relationship, return to their abusive partner, or become involved with another abusive partner. Therefore, HIV prevention interventions that also include abusive male partners are needed. Many couples' interventions aimed to reduce HIV have excluded those experiencing severe IPV, but there have been calls and suggestions for couples' HIV prevention interventions to include couples experiencing severe abuse (Jiwatram-Negrón & El-Bassel, 2014). Another possibility would be for mandated programs for male perpetrators of IPV to include content to reduce HIV-related risk behaviors (e.g. multiple partners) among this population of men.

Policy Implications

There is a need for women who seek safety at DV shelters to be universally asked about their HIV risk, encouraged to seek HIV testing, provided with educational materials about HIV prevention, and offered EBIs for reducing HIV risk. However, incorporating HIV prevention interventions into DV shelters will likely be challenging and involve ethical issues. In this study, we had to substantially reduce the time required for both the theater test and the adapted intervention because the longer times were not feasible for shelter staff. Future efforts to incorporate HIV prevention interventions into DV shelter settings will require consideration of time constraints. Funding will also be needed to support such efforts including trainings for staff on how to best implement EBIs for reducing HIV risk among residents. While this adapted SISTA intervention may be appropriate for women in DV shelters, as mentioned above, the efficacy of this intervention is unknown at this time and

future modifications of this and/or other interventions may be needed for different subpopulations of women in DV shelters.

When implementing HIV prevention interventions into shelter settings, plans should be made for assisting residents with discussing sensitive intervention topics. Given how prevalent sexual violence is in the lives of abused women, HIV prevention interventions for abused women must address the role of sexual violence in their lives and discuss other related sensitive topics (e.g., substance use and mental health problems), which may result in residents feeling distressed. Therefore, plans should be made for how to approach these topics responsibly. For the adapted intervention developed as part of this study, participants will be informed that these topics will be addressed, reminded that they may take breaks or discontinue the intervention if needed, and provided with community referrals for appropriate services.

Conclusions

Regardless of the challenges of implementing HIV prevention interventions into DV shelters, we must not miss the opportunity to prevent abused women from contracting HIV/STI's. This study describes the adaptation of an EBI for reducing HIV risk for women in DV shelters and the steps taken to enhance the adapted intervention's implementation. It is our hope that the adaptation of SISTA for women in DV shelters will result in an effective and sustainable intervention to reduce HIV risk among this high-risk population of women.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

This study was supported by competitive grant funding from the Center for Prevention Implementation Methodology (Ce-Pim) for drug abuse and sexual risk behavior (P30-DA027828) awarded to Courtenay Cavanaugh. We would like to thank the staff and residents from the participating domestic violence shelters for their time and feedback. Thank you also to the members of the Risk and Resilience Lab at Rutgers University in Camden who have assisted with this adaptation.

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Table 1

Using the ADAPT-ITT Model to Adapt SISTA for Women in DV Shelters

Step in ADAPT_ITT Framework	Application
1. Assessment	A. Identified two DV shelters located in the top ten U.S. states with high rates of HIV to participate in the adaptation process
	B. Completed interviews with shelter directors/administrators and direct client service providers about the shelters' current HIV prevention services, organization culture, psychological climate, and the social networks of staff that may affect the implementation of the adapted intervention
2. Decision	A. Decided to adapt SISTA for women in DV shelters
3. Administration	A. Administered theater tests (i.e., demonstrations of exercises from SISTA) to DV shelter directors/administrators, direct client service providers, and residents
	B. Administered brief surveys after demonstrated SISTA exercises to obtain information from participants about whether the exercises should be retained and/or adapted for women in DV shelters
	C. Analyzed results from the theater test
4. Production	A. Developed an adaptation plan to illustrate what text or materials would be adapted
	B. Revised the SISTA Implementation manual that was developed by the CDC to produce draft 1 of the adapted SISTA intervention named SISTA Survivor
5. Topical Experts	A. Drs. Gina Wingood and Jacquelyn Campbell provided feedback about exercises from SISTA to demo during the theater tests and other ways to adapt SISTA for women in DV shelters
6. Integration	A. Integrated topical experts feedback to create draft 2 of SISTA Survivor
	B.Interviewed shelter directors to discuss changes made to adapt SISTA for women in DV shelter following topical experts' suggestions and feedback from theater test and made additional changes to the intervention to produce draft 3 of SISTA Survivor
Next Steps to Be Completed	
7. Training	A.Will train social workers in the shelters on how to implement draft 3 of SISTA Survivor, recruit participants, and train research assistants to assist with data collection during the implementation of SISTA Survivor
8. Testing	A.SISTA Survivor will be administered to 40 shelter residents
	B.Will examine the perceived acceptability and efficacy of adapted SISTA intervention and factors influencing the implementation of the intervention (e.g., organizational culture)

Table 2

Current HIV Prevention Services Reported by 11–12 Shelter Directors and Direct Client Service Providers

	Shelter 1		Shelter 2		Total From Both Shelters	
	%	N	%	(N)	%	(N)
Ever implemented HIV intervention at your shelter?						
No	83	5	100	6	92	11
Yes	17	1		0	8	1
Currently have HIV prevention services at shelter?						
No	83	5	100	6	92	11
Yes	17	1	0	0	8	1
Do you provide residents with educational brochures about HIV prevention?						
No	40	2	83	5	64	7
Yes	60	3	17	1	36	4

One participant from shelter 1 was missing data on the question about educational brochures.

Table 3

Feedback From 28 Stakeholders about The Appropriateness of SISTA Exercises for Women in DV Shelters

SISTA Exercise Demonstrated	Number Recommending Materials Remain Unchanged	Example of Suggested Modifications	Number Recommending Activity be Retained
Gender pride	24	Focus more on survivor pride, consider origins of gender pride	23
SISTA taboo	19	Include survivors of IPV, broaden focus to include women of all cultural backgrounds, have women describe their “SISTA hero”	21
Personal values	20	Discuss how abusers may take values away	22
Card game	22	Discuss how to protect self if partner is not monogamous, if partner uses sex as means of control, and safety planning	22
HIV/AIDS 101	20	Discuss injection drug use including forced drug use and involuntary HIV risk such as rape	23
Traffic Lights of Risk	21	Include non-consensual sexual risk vignettes, discuss non-consensual HIV risk including forced prostitution and harm reduction (e.g., vaginal sex instead of anal sex)	24
Reasons why…	24	Address partner violence, threats, and control as reasons why women don’t use condoms and options for reducing HIV risk	23
Condom basics	26	Discuss safety options for forced unprotected sex	28
Consumer reports	20	Have participants promote condom safety	17
Condom use demo	25	Discuss where to get condoms for free locally	23
Safe oral sex	26	Discuss oral sex as alternative to vaginal sex for harm reduction	26
Female condom	26	Provide information about how this product may be helpful for survivors of IPV and about where to obtain this product locally	26

Table 4

Adaptation Plan for Adapting SISTA for Women in DV Shelters

Session	Aim of Activities/Modifications	Modifications and Examples
	Foster gender, ethnic, and IPV survivor pride	Remove exclusive focus on African American women and enhance IPV survivor pride. For example, ask participants "What does it mean to be a woman of your ethnic background" instead of "What does it mean to be an African American women?" Ask participants "What does it mean to be a survivor of intimate partner violence?" Include two poems to foster IPV-survivor pride.
	Provide HIV education	Expand HIV/AIDS education to include information about IPV related consensual and nonconsensual risk factors for contracting HIV. Ask participants: "Why are women who are abused by intimate partners at greater risk for contracting HIV than non-abused women?" Provide participants with related information. Expand activity so that participants are asked to identify the level of risk for contracting HIV "when a partner pressures a woman to have sex."
	Identify barriers to condom use for survivors of IPV	Include discussion of IPV related barriers to condom use and the limited availability of the female condom
	Demonstrate correct condom use	Replace facilitator demonstrations of correct condom use with video demonstrations since facilitators expressed discomfort with doing demonstrations
	Enhance participants awareness of their risk factors for contracting HIV and help them develop a plan for reducing their risks	Add an exercise that has participants complete a personalized HIV risk assessment & safety plan. Ask participants to check off examples of activities "they have chosen to do" versus activities their "sexual partner has done" that increase her risk for contracting HIV. Provide participants with a list of harm reduction strategies and ask her to identify strategies that may help her reduce her risks.
	Discuss participant concerns with using assertive communication and assist her with safety planning	Ask participants to discuss her concerns about whether assertive communication strategies will result in IPV and incorporate HIV and IPV safety planning.
	Discuss intersection of IPV, substance use, and HIV.	Expand education about the role of substance use and HIV to include discussion of intersection of IPV, substance use, and HIV.
	Enhance financial literacy	Integrate financial planning