



Lessons Learned: Exploratory study of a HIV/AIDS prevention intervention for African American women who have experienced intimate partner violence

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# Lessons Learned: Exploratory study of a HIV/AIDS prevention intervention for African American women who have experienced intimate partner violence

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## **Lessons Learned: Exploratory study of a HIV/AIDS prevention intervention for African American women who have experienced intimate partner violence**

### **Abstract**

Given the prevalence and co-occurring nature of HIV and intimate partner violence among African American women there is a need for a risk reduction intervention. This study explored the results from an exploratory study of an HIV/AIDS prevention intervention for African-American women who have experienced intimate partner violence. The emphasis of this study is to identify lessons learned to guide future research.

Recruitment for the feasibility study was done in two waves over a period of three months. During the first wave, 22 participants were recruited for the intervention group, and in the second wave, 25 participants were in the control group. Pre-post tests were used to evaluate the mean differences between the groups on the three domain measures the intervention was designed to impact (Capacity Building, Sexual Safety Planning, Life Skills). Participants in the treatment group increased their HIV knowledge and decreased reports of alcohol and drug use, while increasing their sexual assertiveness skills, though overall statistical findings indicated that there was no significant difference between the treatment and control group in regards to overall capacity building, sexual safety planning, and life skills.

There is a need to find additional motivators to keep participants engaged, as attrition for both groups was unusually high. Shortening sessions or duration of the intervention to accommodate the multiple demands on these women's lives, and potentially delivering some of the curriculum through technology may be an option for future interventions. Further attention to how African American women can reduce their risks for IPV and their heightened risk for HIV by looking closely at structural inequalities, the social determinants of health, and other contributing factors is a necessary consideration for a successful intervention.

### **Keywords**

Intimate Partner Violence; HIV/AIDS Prevention Intervention; Health Equity; African American Women

### **Cover Page Footnote**

Please find attached the final edited version of the manuscript. The researchers are pleased to know it has been accepted for publication. The first author of this manuscript is Michele Rountree, Associate Professor at The University of Texas at Austin School of Social Work. Dr. Rountree's area of research is on the complex interplay of social, cultural, political and economic factors as determinants for women's heightened risk for experiencing IPV and sexually transmitted diseases such as HIV/AIDS. Her research is focused on understanding the impact of structural, program characteristics and client attributes on utilization of services and developing and implementing prevention and intervention programs that target HIV/AIDS. Co-authors of this manuscript include Meredith Bagwell, Courtney McElhaney, and Katherine Theall, Associate Professor at Tulane University, Department of Global Community and Behavioral Sciences. Dr. Theall areas of expertise are on the social determinants of health; social epidemiology; structural, interpersonal, and biological stress; women and children's mental and behavioral health inequities. Dr. Adama Brown is a statistician with the School of Nursing at the University of Texas at Austin and Courtney McElhaney. We would like to express our sincerist gratitude to National Institute of Mental Health (NIMH) and Columbia University: HIV Intervention Science Training Program for Racial/Ethnic Minority New Investigators (HISTP) Program for funding the study reported in the enclosed manuscript. We would also like to thank the women who participated in the study, without them the work would not be possible. Thank you for your time and consideration in our manuscript. If you have any questions/concerns please direct all communication to the first author, Michele Rountree, at

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with great enthusiasm that we submit the enclosed manuscript What would a HIV/AIDS prevention  
intervention for African-American women who have experienced intimate partner violence look like? To  
your journal Journal of Health Disparities Research and Practice. The first author of this manuscript is  
Michele Rountree, Associate Professor at The University of Texas at Austin School of Social Work. Dr.  
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## **Lessons Learned: Exploratory study of a HIV/AIDS prevention intervention for African American women who have experienced intimate partner violence**

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### **ABSTRACT**

Given the prevalence and co-occurring nature of HIV and intimate partner violence among African American women there is a need for a risk reduction intervention. This study explored the results from an exploratory study of an HIV/AIDS prevention intervention for African-American women who have experienced intimate partner violence. The emphasis of this study is to identify lessons learned to guide future research.

Recruitment for the feasibility study was done in two waves over a period of three months. During the first wave, 22 participants were recruited for the intervention group, and in the second wave, 25 participants were in the control group. Pre-post tests were used to evaluate the mean differences between the groups on the three domain measures the intervention was designed to impact (Capacity Building, Sexual Safety Planning, Life Skills). Participants in the treatment group increased their HIV knowledge and decreased reports of alcohol and drug use, while increasing their sexual assertiveness skills, though overall statistical findings indicated that there was no significant difference between the treatment and control group in regards to overall capacity building, sexual safety planning, and life skills.

There is a need to find additional motivators to keep participants engaged, as attrition for both groups was unusually high. Shortening sessions or duration of the intervention to accommodate the multiple demands on these women's lives, and potentially delivering some of the curriculum through technology may be an option for future interventions. Further attention to how African American women can reduce their risks for IPV and their heightened risk for HIV by looking closely at structural inequalities, the social determinants of health, and other contributing factors is a necessary consideration for a successful intervention.

**Keywords:** African American Women, HIV/AIDS, Intimate Partner Violence, Intervention

## INTRODUCTION

HIV/AIDS remains a major health concern for African American women in the United States. Prevalence rates indicate that the lifetime risk of HIV diagnoses among African American women is 1 in 30 (Hall, An, Hutchinson, & Sansom, 2008). As race is recognized as a social construct and acknowledged in the scholarly arena as a problematic term, African American will be used to describe Americans with at least partial Sub-Saharan African ancestry (Smedley & Smedley, 2005). For African American women in the United States, 87% of new infections in 2010 were attributed to heterosexual contact. One risk factor linked to HIV infection among women is intimate partner violence (IPV; El-Bassel, Gilbert, Wu, Go, & Hill, 2005; Fuentes, 2008; Josephs & Abel, 2009; Sareen, Pagura, & Grant, 2009). The term "IPV" refers to physical violence, sexual violence, threats of violence, and psychological or emotional abuse perpetrated by a current or former spouse, boyfriend or girlfriend, or dating partner (National Center for Injury Prevention and Control [NCIPC] 2003).

Women who experience IPV are at increased risk of contracting HIV/AIDS (Davila, Bonilla, Gonzales-Ramariz, and Villarreal, 2007; El-Bassel, Gilbert, Hu, Go, & Hill, 2005; Gielen et al., 2007; Wingood, DiClemente & Raj, 2000). They are more likely to experience sexual coercion (Murdaugh, Hunt, Sowell & Santana, 2004) and less likely to practice consistent condom use or attempt to negotiate safe sex with their intimate partners (El-Bassel et al., 2005; Raj & Silverman, 2004). Male abusive partners are more likely to engage in risk taking behaviors such as unprotected sex and sexual infidelity relative to their non-abusive male counterparts (Raj, Santana, La Marche, Amaro, Cranston, & Silverman, 2006). Furthermore, women who have experienced abuse are more likely to engage in risky behaviors, such as using drugs and alcohol (Johnson, Cunningham-Williams, & Cottler, 2003) and having sex with multiple partners (Champion, Shain, & Piper, 2004).

Women who have experienced IPV are more likely to suffer from myriad health-related problems (Black & Breiding, 2008; Paranjape, Sprauve-Holmes, Gaughan, & Kaslow, 2009; Straus, Cerulli, McNutt, Rhodes, Conner, Kemball, Kaslow, & Houry, 2009; Wilson, Silberberg, Brown, & Yaggy, 2007; Thomas, Joshi, Wittenberg, & McCloskey, 2008), including risk for HIV infection (Breiding, Black, & Ryan, 2008). Approximately 1 in 5 Black (22%) women in the United States have experienced rape and just under half of Black non-Hispanic (41%) women reported sexual violence other than rape in their lifetime (Black, Basile, Breiding, Smith et al., 2011). Among a large representative sample of U.S. women, 11.8% of past year cases of HIV were attributed to IPV (Sareen, Pagura, & Grant, 2009).

IPV has been linked to HIV infection through multiple interconnected pathways, including "depression, substance abuse, exchange sex, first sex at an early age, high numbers of lifetime and current sexual partners, unfaithful partners, and inability to negotiate safe sex (Fuentes, 2008, p.1591)." Women who experience IPV report using substances to numb out the abuse taking more sexual risks and these behaviors appeared to be coping mechanisms in light of lowered self-esteem, depression, and the unhealthy nature of the relationship with their abusive partner (Rountree & Mulraney, 2010). These findings are substantiated by a path analysis, which demonstrates that physical and sexual violence directly lead to substance abuse and sexual risk behaviors, which in turn increase women's susceptibility to acquisition of HIV (Campbell, Lucea, Stockman, and Draghon, 2013). According to this model, IPV also indirectly leads to substance abuse through PTSD and depression (Campbell et al., 2008; Rountree & Mulraney, 2010).

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Men's violent and risky behaviors may also increase their female partners' risk. Men who perpetuate IPV are known to engage in greater risk-taking behaviors, including having more than one intimate partner, sex outside the main intimate relationship, buying sex, sexual coercion, inconsistent or non-condom use, having fathered more than three children and injecting drugs (Gilbert, El-Bassel, Wu, & Chang, 2007; Raj, Santana, La Marche, Amaro, Cranston, & Silverman, 2006). They are also more likely to sexually assault their partners. As reported by Campbell, Greeson, Bybee, & Raja (2008), between 46%-53% of African American women have been sexually assaulted by their abusive partners (Campbell & Soeken, 1999; Sullivan & Rumptz, 1994).

Despite the evidence of the growing impact of HIV/AIDS among African American women, there are few HIV interventions designed for this population (El-Bassel, Caldeira, Ruglass, & Gilbert, 2009). El-Bassel et al. (2009) tested a HIV prevention intervention entitled *Project Connect*, a relationship-based HIV prevention program for African American women and their partners. The authors conclude that it might not be the best choice for African American women who experience IPV. In the case of relationship violence, "women need to understand ways to avoid involvement in relationships that place them at risk for IPV and HIV infection and to have improved access to female-initiated and female-controlled prevention methods such as the female condom and vaginal microbicides," (p. 997).

Several other interventions designed specifically for African American women and adolescents successfully increase HIV preventative behaviors among participants. These interventions are SISTA (*Sisters Informing Sisters About Topics on AIDS*; DiClemente & Wingood 1995), SiHLE (*Sistering, Informing, Healing, Living, and Empowering*; DiClemente, Wingood, Harrington, 2004), WiLLOW (*Women Involved in Life Learning From Other Women*; Wingood et al., 2004), Sister to Sister (Jemmott, Jemmott, & O'Leary, 2007), and Project FIO (*The Future is Ours*; Ehrhardt et al., 2002). Though these interventions are exemplary models for creating culturally competent interventions for African American women, they do not attempt to reduce the co-occurring risks of HIV and IPV for African American women (Gielen, Ghandour, Burke, Mahoney, McDonnell, & O'Campo, 2007).

Another intervention, called *Enhanced Negotiation*, was created for drug-using African American women. This intervention examined the meanings behind gender-specific interactions, power behaviors and gender norms, and teaches condom use, safer injection, and communication and negotiation skills (Theall, Sterk, & Elison, 2004). When administered to a group of African American women with histories of victimization, the intervention significantly reduced future experiences of emotional and sexual (but not physical) victimization for participants (Theall, Sterk, & Elison, 2004). The fact that this study reported on an HIV intervention that prevented future victimization among drug-using women with abuse histories indicates that HIV and IPV prevention go hand in hand. This is an important prospect for women with co-occurring risk for HIV and IPV. Nevertheless, as none of these interventions were designed specifically for survivors of intimate partner violence, there is a significant gap yet to be filled.

Encouragingly, SEPA (*Salud, Educación, Prevención, y Autocuidado*), an intervention developed for Hispanic/Latina women ages 18-44 who are at risk for HIV due to unprotected sex, does include a component that addresses domestic violence. Though efficacy trials focused on Mexican and Puerto Rican women, the researchers believe the intervention has the potential to be effective for at-risk women of other races and ethnicities if the core activities of the intervention can address the women's needs. However, these investigators did not identify or

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measure IPV-related variables, meaning questions remain regarding the impact of the domestic violence component of this intervention (Peragallo, DeForge, O'Campo, Lee, Kim, & Cianelli, 2005).

The review of this prevention literature reveals there is still a need for an intervention to address intersecting IPV and HIV among African American women. This exploratory study focuses upon piloting a HIV/AIDS prevention intervention for African-American women who have experienced intimate partner violence with an emphasis upon identifying lessons learned. The emerging intervention is unique in that it was created in a feminist-lens participatory approach, meaning that it was informed by women and for women, specifically for the women for whom it intends to benefit – survivors of IPV. (For more information on this preliminary study, see Rountree & Mulraney, 2010). While other interventions may have elements of discussing power dynamics or intimate partner violence, none make this their primary emphasis specially designed for African American women in these unique contexts.

### **METHODS**

#### Planning

The intervention was developed based upon the Rountree and Mulraney (2010) study that identified the core elements of a HIV/AIDS risk reduction intervention. In that study, investigators used a community-based participatory approach and sought input from women who had experienced IPV to develop the intervention. At the core of the intervention, topics emphasize HIV prevention, learning about domestic violence, self-esteem, life skills to increase efficacy, personal capacity building, communication, negotiating skills, and educational and employment attainment. The intervention attempts to address structural challenges placing African American at heightened risk for the intersectionality of HIV/AIDS and IPV with a life skills module, focusing on mental health, job assessment, and linkages to community services and support. It also sought to address barriers to access by providing childcare and choosing a central location where the intervention was delivered.

The intervention's development was informed by another study undertaken by the researchers Rountree, Zibalese-Crawford, and Bagwell (2012), that reported personal and partner characteristics that may elevate sexual risk factors, the aspects of culture that serve as protective or risk factors in the women's lives, living with an HIV diagnosis, and specific intervention strategies. In regards to preventing HIV infection or avoiding reinfection for women in abusive relationships, participants shared what they desired in a culturally, contextually sexual risk and IPV prevention intervention. The participants shared that a helpful intervention would focus on four main subthemes: (1) *getting out*, focusing on safety planning for leaving abusive relationships, identifying warning signs of abusive relationships, knowing one's own strengths and boundaries, and standing up for oneself, (i.e. learning the difference between assertive and aggressive); (2) *reaching for help*, identifying community resources for both domestic violence and HIV/AIDS prevention, such as shelters and clinics; (3) *personal healing*, which primarily targets the women's empowerment, from seeking counseling to developing higher self-esteem; and (4) *strength in numbers / institutional inclusion*, a subtheme in which women talked about addressing IPV with other African American women who have shared similar experiences through support groups, as well as addressing IPV as a community by starting a public dialogue and awareness campaigns.

#### Research Questions

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The study was conducted between April and May 2011. The line of research inquiry of this pilot study was to determine if the participation in the intervention increased the participants' capacity to protect themselves from HIV infection and explore the impact of the intervention on the participants' ability to practice sexual safety planning. Furthermore, the pilot study sought to investigate how the participation in the intervention impacts the building of the participants' life skills related to educational and employment goals, and links to support for mental health and substance use issues. The preliminary research questions guiding the study are as follows:

- Does the HIV/AIDS risk reduction intervention have an impact upon the capacity building (i.e., HIV/AIDS awareness, identification of healthy relationships) of participants?
- What is the impact of the intervention upon the skill acquisition of sexual safety planning (i.e., recognition of relationship power and control dynamics, early warning signs versus immediate danger, communication and negotiating skills) of participants?
- Does the intervention have an impact upon the development of life skills (i.e., assessment of educational and employment goals, link to self-determined educational and employment goals, assessment of alcohol or drug abuse and depression screen, link to services and support) of participants?
- Based upon the results of the study what would a HIV/AIDS prevention intervention for African American women who have experienced intimate partner violence look like?

### Protocol

Institutional Review Board approval was established to conduct the pilot study. Women were recruited from a domestic violence shelter in the southwestern part of the United States. The shelter provides a wide spectrum of services to survivors of violence, including: a 24-hour hotline; a 100-bed Family Shelter for battered adults and children for temporary and long-term stay up to 60 days; 46 apartment units of transitional housing for families leaving shelter; and resource advocacy. The average length of stay in the Family Shelter for adults and children is approximately forty-five days.

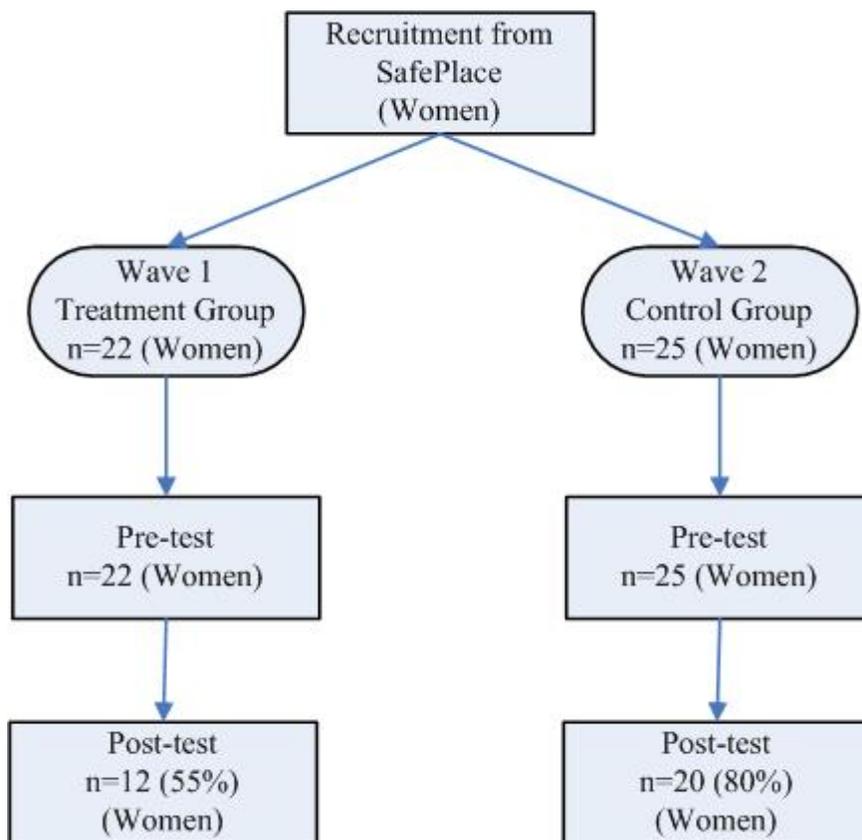
Eligibility criteria for this study were: (a) identifying as an African American woman over the age of 18; (b) having experienced physical abuse, rape, or sexual abuse within the last two years; (c) having had sex with an intimate partner when she did not want to within the last two years; (d) speaking, reading and writing in English; (e) self-identifying that her abusive partner was male; and (f) being willing to complete a series of self-administered questionnaires and participate in a series of educational sessions. Only heterosexual women were included in this sample because extensive literature underscores that women's heightened risk for HIV/AIDS infection is related to male-to-female perpetrated intimate partner violence and occurs in a context where heterosexual sexual contact is the primary mode of HIV transmission among women and the methods available for women to keep themselves safe depend on male cooperation.

To recruit participants, the research team posted fliers and the domestic violence shelter staff identified women who met eligibility criteria. Two waves of recruitment were conducted over a period of three months. In a non-randomized trial, during the first wave 22 participants were recruited for the intervention group, and in the second wave, 25 participants were in the control group. All eligible participants were provided an overview of the study, assurance of

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confidentiality, and a \$25 grocery store gift certificate after completion of the self-administered questionnaires to establish baseline measures. The pre-test measure was scheduled at the shelter and childcare was provided at no cost to the participants. Prior to the pre-test, participants completed written, informed consent forms. After the intervention, all participants were asked to complete the post-test survey. A \$40.00 grocery store gift certificate was given at the end of the final intervention session. Ten participants withdrew from the intervention group and five from the control group (See Figure 1). Participants were contacted via telephone to schedule a day and time to complete the post-test questionnaires on-site at the shelter in a confidential, private room. In instances where we were unable to contact the women in either the intervention or control group, there was a variety of reasons for attrition: physical illness, dealing with the criminal justice system related to their pending abuse cases, prioritization of basic needs, housing and employment, establishing continuity of social services such as food stamps, and housing subsidies. In some cases the phones of the participants were disconnected.

Figure 1. Study Design



### Intervention

The HIV/AIDS Risk Reduction Intervention is an eighteen hour intervention, extending over a six-week period, with each session running three hours in the evening. The intervention was held on-site at the shelter in private classrooms with a childcare center on site, where a licensed childcare specialist was available to take care of participants' children. Facilitators were African American licensed social workers or community health workers with experience

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working this particular population. The facilitators of the curriculum participated in a training led by members of the research team on the components of the intervention curriculum and on the facilitation of the content.

Participant attendance in the intervention was approximately fifty percent regardless of the modules delivered. An integral part of the research design in the development of this contextually and culturally congruent intervention was the active participation of a community advisory board, reflecting consumers and experts in the delivery of IPV and HIV/AIDS services whose contribution to the research project ensured that participant's worldviews were integrated for "cultural congruence", as well as focus group sessions discussed earlier.

The intervention contains three modules. Module 1, *Capacity Building*, covers self-perception related to gender and racial/ethnic pride, self-image, healthy relationships, and HIV/AIDS awareness. Module 2, *Sexual Safety Planning*, includes communication and negotiation skills, issues related to power and control, early warning signs of a violent relationship, and dealing with emergencies and immediate danger. Module 3, *Life Skills*, includes assessing educational and employment goals, providing links to self-determined educational and employment goals, assessment of alcohol and drug abuse, a depression screen, and links to services and support. Each of the measures are clarified in detail below. The control group completed the pre-post self-administered questionnaires, and was given a packet of information on contact information related to domestic violence and HIV/AIDS services.

**Table 1. Overview of the Intervention Components and Measures**

<b>Modules and Measures</b>	<b>Num. of Items</b>	<b>Possible total score</b>	<b>Indication of Higher Score</b>
<b><u>Capacity Building</u></b>			
Attitudes Pertaining to Condom Use Scale (APCU)	12	12-36	Less agree to use condoms
Sexual Risk Cognitions Questionnaire (SRCQ)	22	22-110	More Sexual Risk Cognitions
Condom Use Self-Efficacy Scale (CUSES)	28	28-140	Less Condom Use Self-Efficacy
HIV Knowledge Questionnaire (HIV)	18	0-18	More HIV knowledge
Confidence/Temptation Scale—Confidence Scale (CTS- CS)	10	10-50	More confident about leaving
Confidence/Temptation Scale—Tempt Scale(CTS-TS)	10	10-50	More Tempted to stay or return
<b><u>Sexual Safety Planning</u></b>			
Attitudes toward Women Scale (AWS)	15	0-45	More pro-feminist, egalitarian attitude
Domestic Violence Coping Self-Efficacy Measure (DVCSE)	30	0-100	More Domestic Violence Coping Self-Efficacy
Sexual Assertiveness Scale (SAS)	18	18-90	More Sexual Assertive
Sexual Relationship Power Scale-Relationship Control (SRPS-RC)	15	15-60	More Sexual Relationship Control Power
Sexual Relationship Power Scale-Decision-Making (SRPS-DM)	8	8-24	More Sexual Relationship Decision-Making Power
<b><u>Life Skills</u></b>			
CAGE-adapted to include drugs (CAGE-AID)	4	0-4	More likely have drinking or drug use problem
Simple Screening Instrument for Alcohol and Other Drug Abuse (AOD)	16	0-21	More likely have Alcohol and other drug abuse
Alcohol Use Disorders Identification Test (AUDIT)	10	0-40	More likely have alcohol use disorder
Work Goal Orientation Scale (WGO)	16	6-96	Less work goal orientation
Center for Epidemiologic Studies Depression (CES-D)	20	0-60	More symptomatology

**Measures**

Socio-demographic variables, including age, education, income, number of children-and marital status, were determined by collecting demographic data at baseline from both groups' participants. In addition to socio-demographic variables, this study contained several measures for the three modules of the intervention, described as follows:

**Capacity Building.** Attitude to condom use was assessed using Attitudes Pertaining to Condom Use Scale (APCU; Valdiserri, Arena, Proctor, & Bonati, 1989), a 12-item measure to assess women's attitudes about condoms. The attitudinal items asked about participant's condom use and beliefs. The "agree" responses were coded as 1 and "not sure" or "disagree" responses were coded as 2 and 3, respectively. Twelve items were summed to create a condom attitudes

score with higher scores indicating more negative attitudes toward condoms. The Cronbach's alpha value for the APCU for this sample is only 0.58, which is less than the desired 0.70.

The Sexual Risk Cognitions Questionnaire (Shah, Thornton & Burgess, 1997) was designed to assess the type and frequency of cognitions associated with unsafe sex. It consists of 22 items concerning people's thoughts when they did not use a condom or did not consider using a condom. Response choices were on a 5-point scale ranging from "never had thought" to "very frequently had thought." Items were added together to create a sexual risk cognitions score with higher scores indicating more sexual risk. The Cronbach's alpha value for this sample is 0.94, which indicates high reliability, and is consistent with previous studies (Shah, Thornton & Burgess, 1997).

The Condom Use Self-Efficacy Scale (CUSES; Mahoney, Thombs, & Ford, 1995) assesses efficacy to purchase condoms, apply and remove them, and negotiate their use with partners. Twenty-eight items were used to measure, and the response choices were on a 5-point scale ranging from strongly agree to strongly disagree. Items were added to create a condom use self-efficacy score with higher scores indicating more sexual risk towards condom use. Internal consistency for the entire scale is 0.91, and test-retest reliability (two-week) is 0.81 (Brafford and Beck, 1991). The internal consistency for this sample is 0.94.

The HIV knowledge questionnaire (HIV; Carey & Schroder, 2002) was developed and evaluated for use as an adult HIV prevention program evaluation tool in a diverse community. It is a brief self-report measure of HIV-related knowledge with 18 items. Correct responses were coded as 1, and incorrect or uncertain responses were coded as 0. Items were summed to create a HIV knowledge score with higher scores indicating higher level of HIV knowledge. The internal consistency ranged from 0.75 to 0.89 (Carey & Schroder, 2002). The Cronbach's alpha is 0.78 for the current study sample.

Confidence (CS) and Temptation Scale (TS) (CTS; Lerner & Kennedy, 2000) is about self-efficacy and coping concerning readiness for change in women who have experienced IPV. The CTS is a measure of self-efficacy for leaving a violent relationship. Responses choices were on a 5 point scale ranging from "not at all" to "extremely." Items were added up to create a confidence scale score (CTS-CS) and a temptation scale (CTS-TS) score with higher CTS-CS scores indicating higher level of confident about leaving; higher CTS-TS scores indicating higher level of tempted to stay or return. Both the confidence and temptation scales have a high internal consistency of 0.98 (Lerner & Kennedy, 2000). The internal consistency for our sample is 0.85.

**Sexual Safety Planning.** The Attitudes toward Women Scale (AWS; Spence & Hahn, 1997) containing 15 items was a short version of the original 55-item AWS. This scale was designed to measure attitudes toward equal rights for women. Response choices were on a 4-point Likert scale with "agree strongly" coded as 0 and "disagree strongly" responses coded as 3. The Cronbach alpha value of the 15-item form has been found to be 0.89 in a sample of college students (Spence & Hahn, 1997). The Cronbach's alpha from the current sample was 0.87.

Domestic Violence Coping Self-Efficacy (DVCSE; Benight, Harding-Taylor, Midboe & Durham, 2004) is a 30-item questionnaire that is rated on a scale of 0 (not at all capable) to 100 (totally capable). This measure could be utilized to help people by indicating areas where they feel especially vulnerable or empowered in a relationship. The internal reliability of the DVCSE was 0.97 (Benight, Harding-Taylor, Midboe & Durham, 2004). A high internal consistency (Cronbach's alpha =0.96) is also showed from the current study sample.

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The Sexual Assertiveness Scale (SAS; Morokoff, Quina, Harlow, Whitmire, Grimely, Gibson, & Burkholder, 1997) is a 5-point Likert scale measure of sexual assertiveness in women that consists of factors measuring initiation, refusal, and pregnancy and sexually transmitted disease prevention assertiveness. Each item was rated with 1 standing for “never” and 5 standing for “always”, with a higher score indicating greater sexual assertiveness. The test-retest reliability ranged from 0.59 to 0.77 (Morokoff, Quina, Harlow, Whitmire, Grimlye, Gibson & Burkholder, 1997). The internal reliability of the SAS from the current study sample was 0.96.

Sexual Relationship Power Scale (SRPS; Pulerwitz, Gortmaker, & DeJong, 2000) is a 23-item measure that combines both Relationship Control and Decision-Making Dominance subscales. Items were rated on a 4-point scale, with 1 represented as strongly agree and 4 represented as strongly disagree. Higher score of SRPS indicates more sexual relationship power. The relationship control (SRPS-RC) subscale consists of 15 items, and the decision-making dominance (SRPS-DM) subscale has 7 items. The reliabilities of the two subscales are 0.86 and 0.62, respectively (Pulerwitz, Gortmaker, DeJong, 2000). The current sample shows that the item internal consistency of the two subscales is 0.80 and 0.68, respectively.

**Life Skills.** The CAGE adapted to include drugs (CAGE-AID; Brown & Rounds, 1995) is a screening tool for alcohol and drug problems with only 4 items. Item responses are either “yes” or “no,” and each affirmative response earns 1 point. A total score of one point indicates a possible problem, and two points indicates a probable problem. The internal reliability of the CAGE-AID from the current study sample was 0.80.

The simple screening instrument for Alcohol and Other Drug (AOD; Center for Substance Abuse Treatment, 1994) is an assessment tool to identify level of risk for AOD abuse. Item responses are either “yes” or “no,” and each affirmative response earns 1 point. The total possible score is 21, and higher scores indicate higher possibility of alcohol and other drug abuse. The internal reliability of the AOD was 0.7 (Center for Substance Abuse Treatment, 1994), and 0.85 from the current study sample.

Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) is a simple ten-question test to detect alcohol problems experienced in the last year. Item responses are either “yes” or “no,” and each affirmative response earns 1 point. Questions deal with alcohol consumption, alcohol dependence-and alcohol related problems. A score of 7 in women (8 in men) indicates a strong likelihood of hazardous or harmful alcohol consumption. A score of 13 or more is suggestive of alcohol-related harm. The internal reliability of the AUDIT from the current study sample was 0.86

Work Goal Orientation (WGO; Vandewalle, 1997) is domain-specific to work settings, to assess goal orientation. Each item was rated on a 6-point scale with 1 indicating strongly agree and 6 indicating strong disagree; there were 16 items. Higher score means less goal orientation. Questions deal with learning goal orientation, proven performance goal orientation, and avoid performance goal orientation. The internal consistency, Cronbach's alpha values for the current data was 0.86.

The Center for Epidemiologic Studies Depression (CES-D; Radloff, 1977) is a short, 20-item, self-report scale designed to measure depressive symptomatology in the general population. The items of the scale are symptoms associated with depression using a 4-point scale, with 0 The simple screening instrument for Alcohol and Other Drug (AOD; Center for Substance Abuse Treatment, 1994) is an assessment tool to identify level of risk for AOD abuse. Item responses are either “yes” or “no,” and each affirmative response earns 1 point. The total possible score is

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### Data Analysis

The collected data was keyed in and analyzed using standard statistic package software, SPSS 20.0 (IBM Corp., 2011). Preliminary analyses were conducted by comparing the demographics of treatment and control groups on their socio-demographics. Results indicated that there was no significant difference on the background information using chi-square tests. The hypotheses of this exploratory study concern the differences between treatment and control groups on the measures of three modules. Therefore, the repeated measures ANOVA were conducted to evaluate the mean differences of pre-post tests on the three domain measures (Capacity Building, Sexual Safety Planning, and Life Skills) between the groups. To adjust for multiple comparisons, Bonferroni correction are used and all tests were evaluated at an alpha-level of .0035.

## **RESULTS**

### Socio-Demographic Characteristics

All of the participants were African American women. About half (55% for control group and 50% for treatment group) had attended some college, and most had a household annual income of less than \$15,000 (70% for control group and 67% for treatment groups). In addition, most of the participants were either single or divorced (90% for control group and 92% for treatment group). On average, participants had at least two children. The mean age between two groups seems different (39.2 for control group and 47.8 for treatment group) but was not statistically significant (see Table 2). Overall, the same trends are found in both the control and treatment groups in terms of socio-demographic characteristics.

**Table 2. Socio-Demographic Characteristics of Treatment and Control Group**

Socio-demographics		Control Group		Treatment Group	
		(n=20)		(n=12)	
		Freq	(%)	Freq	(%)
Race/Ethnicity	African American	20	(100%)	12	(100%)
Education	High school diploma/ GED	9	(45%)	6	(50%)
	Some college or more	11	(55%)	6	(50%)
Income	Up to \$15,000	14	(70%)	8	(67%)
	Over \$15,001	4	(20%)	3	(25%)
	Missing	2	(10%)	1	(8%)
Marital Status	Single (divorced)	18	(90%)	11	(92%)
	Married	2	(10%)	1	(8%)
Mean (SD)					
Age		39.2	(12.4)	47.8	(9.1)
Number of Children		2.3	(2.2)	2.3	(1.7)

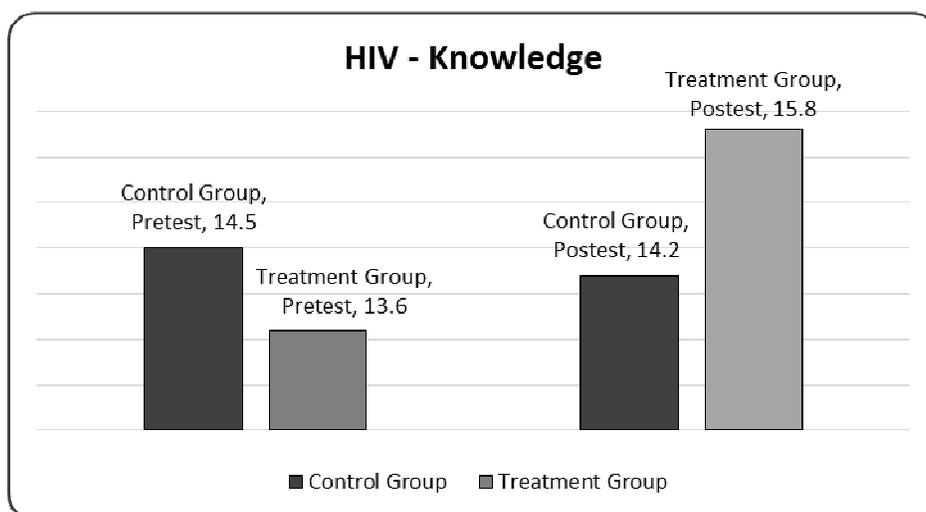
Capacity Building Measures

Results indicated that in regards to capacity building, there were no statistically significant differences between pre-posttest scores (See Table 3). The treatment group experienced an increase in HIV/AIDS knowledge after participation, although it is not statistically significant, which is due to the small sample size given the effect size of the mean difference is 0.52.

**Table 3. Pre-Post Tests of Capacity Building Measure by Groups**

Scale	Control Group (n=20)		Treatment Group (n=12)		F-test	Sig.
	Pre-test	Post-test	Pre-test	Post-test		
APCU	15.8 (2.7)	15.8 (2.8)	16.2 (2.5)	16.2 (3.6)	.016	.900
SRCQ	44.3 (16.5)	42.8 (16.2)	37.1 (13.7)	36.4 (14.4)	.384	.540
CUSES	52.6 (14.9)	52.2 (15.3)	53.0 (13.0)	50.5 (12.3)	1.318	.260
HIV	14.5 (3.0)	13.6 (4.0)	14.3 (4.1)	15.7 (2.2)	5.504	.026
CTS- CS	28.6 (8.6)	28.9 (9.2)	29.2 (8.4)	32.7 (8.5)	.684	.415
CTS- TS	27.0 (10.9)	27.7 (10.5)	28.6 (8.0)	33.9 (9.9)	.916	.347

Figure 2:



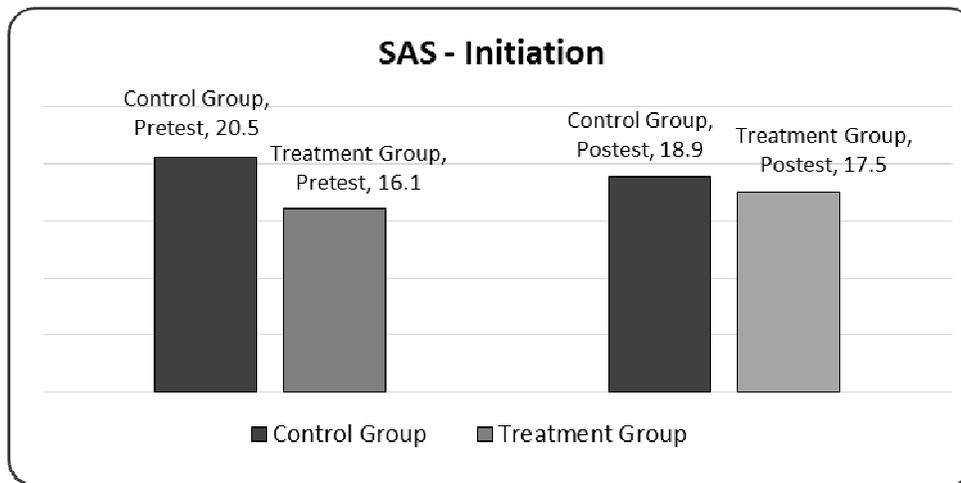
**Sexual Safety Planning**

In regards to sexual safety planning, although participants in the intervention showed higher self-efficacy to cope with domestic violence and sexual assertiveness skills after they attended the HIV/AIDS risk reduction intervention (See Table 4), no statistically significant differences in sexual safety planning were found between pre- and post-test scores.

**Table 4. Mean Scores for Pre-Post Tests of Sexual Safety Planning Measure by Group**

Scale	Control Group (n=20)		Treatment Group (n=12)		F-test	Sig.
	Pre-test	Post-test	Pre-test	Post-test		
AWS	28.0 (3.6)	26.8 (4.0)	25.6 (3.5)	26.8 (3.8)	30.000	.173
DVCSE	72.2 (25.1)	76.3 (24.8)	72.9 (23.2)	83.6 (20.5)	2.364	.136
SAS	61.1 (10.3)	59.6 (10.5)	59.7 (8.4)	62.3 (12.8)	1.313	.261
SRPS-RC	40.6 (7.0)	41.4 (8.1)	39.4 (6.6)	41.4 (8.3)	.265	.610
SRPS-DM	15.4 (2.4)	15.6 (2.5)	15.6 (3.7)	17.0 (3.1)	1.463	.236

Figure 3:



**Life Skills**

No statistically significant differences in scores were found for life skills measures, although the treatment group reported less alcohol and drug use, and higher work goal orientation at post-test. Table 5 presents the mean scores on all scales of the life skills measures.

**Table 5. Mean Scores for Pre-Post Tests of Life Skills Measure by Group**

Scale	Control Group (n=20)				Treatment Group (n=12)				F-test	Sig.
	Pre-test		Post-test		Pre-test		Post-test			
CAGE- Aid	1.0	(1.4)	1.0	(1.5)	1.2	(1.4)	0.7	(1.0)	2.504	.126
AOD	2.7	(3.3)	2.3	(3.2)	2.6	(3.2)	1.3	(1.3)	.696	.411
AUDIT	3.2	(4.8)	3.1	(4.0)	2.1	(3.9)	1.6	(2.0)	.066	.798
WGO	51.3	(16.7)	52.5	(17.9)	48.1	(10.5)	52.2	(16.0)	.000	1.000
CES-D	24.6	(13.6)	23.9	(13.3)	28.1	(11.1)	23.5	(11.5)	.577	.454

Only 54% (12 out of 22) of participants in the treatment group completed the intervention. In order to better understand the attrition within our sample, we conducted two post-hoc analyses, comparing: 1) the pretest scores of the women in the control group to those of the women in the intervention group, and 2) the pretest scores of the women who dropped out of the intervention group to those who completed the intervention group. We conducted the first analysis because fewer women dropped out of the control group than the intervention group. Results show that, in general, there seems no difference between control and treatment groups for the pretest results, except the Attitudes toward Women Scale (AWS) scale score. The control group tends to be have a more egalitarian attitude than the treatment group at pretest.

Results of the second analysis show that in general, there seems no difference of the pretest between those who dropped out and who did not drop out from the treatment groups. However, two variables may help exemplifying why participants dropped out the treatment groups: age and sexual risk cognitions. Participant who dropped out from the treatment tend to be younger when compared with those who stayed and finished the treatment. Also, they tend to be higher in sexual risk-taking.

## DISCUSSION

This exploratory pilot study attempts to bridge the gap in the current field of HIV prevention by moving HIV/AIDS prevention practitioners and researchers towards discovering an effective HIV prevention program for African American women who have experienced intimate partner violence. Participants in the treatment group increased their HIV knowledge and decreased reports of alcohol and drug use, while increasing their sexual assertiveness skills. While overall findings indicate that there was no significant difference between the treatment and control group in regards to overall capacity building, sexual safety planning, and life skills, this may also be a the result of the very limited sample size.

As this was the pilot feasibility trial of the intervention, we identified several areas that need to be addressed to increase our ability to draw conclusions on the efficacy of the study. Most notably, it is difficult to understand the impact of the intervention because of the attrition effect of the participants in the control and treatment group. There is a difference between the control and treatment groups on the Attitudes toward Women Scale (AWS) scale score for the control group suggesting these participants have a more egalitarian attitude than the treatment group participants.

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Thus, creative strategies are needed to reach women who do not initially have egalitarian attitudes, those who are younger, and those who have the highest level of sexual risk taking – in other words, those with the highest risk! More qualitative work is needed to explore these findings in the context of African American women’s ecological contexts and the impact of structural inequalities to make sure content and mode of delivery are appropriate.

Shortening sessions or length of commitment given the multiple demands on these women’s lives, and potentially delivering some of the curriculum in non-traditional ways such as the use of technology may be an option. Retention rates for Project FIO, an HIV prevention intervention designed for African American women were consistently above 85% at the 12-month follow-up consisting of eight two-hour sessions over an eight-week period held at a Planned Parenthood clinic (CDC, 2013b). The location of the intervention may have served as a factor in the attrition rate given the stigma associated with experiencing IPV. A consideration may be community health centers such as where SiHLE and Sister-to-Sister: The Black Women’s Health Project took place; these interventions reported greater success in retention of participants (Alford, Bridges, Gonzalez, Davis, & Hauser, 2003; Jemmott, L S, Jemmott, J B, O’Leary & A, 2007).

Interventions for survivors of IPV must address structural barriers, and they must do so on both the more ‘distal’ and more ‘proximal’ factors. Examples of distal factors, or broader social contexts, are socioeconomic status, educational attainment, employment opportunities, and housing. According to Gehlert et al. (2008), factors that are traditionally thought of as ‘up-stream’ (i.e., community or neighborhood factors) factors are actually closely linked to an individual’s health – they are not distal at all. Social environments can impact the individual quite directly; they “get under the skin” (p. 339). Greenfield, Rand, & Craven (1998) found that rates of non-lethal IPV are highest among women residing in low-income households. The disproportionate number of African Americans living in low-income households, and the higher rates of unemployment within this population serve as risk factors for IPV, and subsequent HIV infection. Though Module Three of this intervention focused on establishing and providing resources for employment and educational goals for the participants, similar educational and employment services for men who are at risk for perpetrating could decrease the likelihood of these women being abused. Until the ‘up-stream’ social determinants of health are addressed, we will have an incomplete picture of how these factors impact both women and men, placing them at risk for IPV and HIV infection.

More ‘proximal’ factors, or those occurring at the psychosocial level, are those that women face on a day-to-day basis as they flee abusive situations. There are several challenges to working with women at this point of crisis, including the transient nature of their housing situations, and the fact that, as these women are trying to rebuild their lives, HIV/AIDS prevention may not be a high priority. There are multiple demands on the time and energy of women leaving abusive situations. Although researchers and scholars consider HIV/AIDS a major health concern for this population, other concerns may be more pressing for women utilizing services at domestic violence shelters. Wilson et al. (2007) found that sexually transmitted infection (STI) was a commonly untreated health problem among a sample of clients at a domestic violence crisis center in North Carolina. Although staff perceived that client health needs were related to reproductive health and HIV/STI, these were not as great a priority for the clients, who more commonly sought treatment for a number of other ailments (chronic pain, gastrointestinal problems, sleep disorders, back pain, physical injury, and hypertension) and

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concentrated on mental stress, mental illness, and the connection between mental and physical health in qualitative interviews.

Furthermore, it is common for women to return to abusive partners. While in an abusive relationship, gender norms and associated IPV have a “tacit” influence on women's HIV risk behavior, wherein women would rather succumb to partner wishes of condom non-use to avoid conflict and violence (Go et al., 2002). In one study, gender norms hindered the effectiveness of HIV prevention messages because HIV-risk felt less salient than the looming threat of violence from women’s partners if they stepped outside of gender role expectations (Go et al., 2002). This is an important finding in light that women with a high drop out rate (the intervention group) had lower pretest scores on equality of women in regards to gender norms. This demonstrates that at all stages in the leaving and healing process, survivors have multiple and conflicting demands on their priorities and sexual safety may not be among them. This leads to important questions about future interventions: How do we ensure the salient threats (physical abuse from a partner) do not overshadow the potential threats (HIV infection) in women’s lives? More realistically, we must recognize that salient threats must be addressed first in order to address the potential threats.

Future interventions should seek to gain a deeper understanding of the additional factors influencing the lives of this population; socioeconomic status, availability of safe and affordable housing, educational level, and employment opportunities. There is also the potential to initiate a larger community-level conversation surrounding the root cause of these African American women’s risk factors for HIV infection and experiencing intimate partner violence.

Women who experience IPV may not perceive their own HIV risk. In one qualitative study, Cole, Logan, & Shannon (2008) examined the self-perceived HIV risk among women who had obtained protective orders from abusive male partners. They found that illicit drug use and the number of sex partners in the past year were associated with participants self-perceived HIV risk; however, “sexual risk practices with the abusive partner, specifically lack of condom use and the partner's extra dyadic sexual activity, were not related to women’s perceptions of risk,” (p. 294). On the other hand, some researchers have found that women residing in a domestic violence program viewed themselves as at-risk for HIV/AIDS because of their inability to control sexual decision-making and their personal and their partner’s risk-taking behaviors (Rountree & Mulraney, 2010). Together, these findings seem to indicate that there is a range in which some survivors do perceive their HIV risk as high because of their experience with IPV and others do not. Thus, increasing survivors’ awareness of IPV and educating them on the importance of sexual health and HIV/STI prevention becomes a priority. Future research should seek to explore the ways in which women leaving abusive situations do or do not prioritize their sexual health and sexual decision-making, as well as explore ways to increase their motivation in preparing for sexual safety planning.

A lesson learned from this study is that the measures selected were too complex to capture the core of the purpose of the intervention. The measures were appropriate for the intervention and the population, strength of the study. Threats to measurement, such as social desirability or pre-test sensitization, are controlled for in the control group design. However, there is concern about participant burden, as the questionnaires were quite lengthy for the women to answer. To relieve participants of the burden, shorter scales that are language and literacy appropriate should be revisited and vetted with survivors before prior intervention trials. This could involve qualitative work to understand language that is relevant to participants and presented in a form in which meaning is clearly conveyed. Simplifying scales in this manner

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would provide women the skills to self-assess their risk of future HIV exposure in the context of abusive relationships. In future trials, a different set of measures will be selected to more precisely indicate the efficacy of the intervention.

### Limitations

The discrepancy of age between treatment and control groups highlights the necessity of using appropriate assignment procedure prior to estimating treatment effects among groups. In addition to the morbidity rate, another limitation of this study was that it was not a random control trial, as participants were recruited in two waves: the first for the experimental group and the second for the control group. As such, there could be confounding variables that impact the results of the study. Quasi-experimental design is a limitation of the study lacking a randomized trial limiting generalizability of the results. Social support may have accounted for any significant results among the treatment group participants. Ultimately, the high rate of attrition reduced the sample size, impacting limited power to detect any significant differences between groups.

### **CONCLUSION**

This pilot study moves us toward discovering what does and does not work when implementing an empowerment-based HIV prevention intervention to African American women who have experienced intimate partner violence. This study is particularly strong in that it addresses a gap in the literature: that for the design of culturally and contextually relevant interventions for African American survivors of IPV. It is grounded in a community approach, using women's voices to shape and guide the intervention content. Given the multiple and intersecting oppressive factors on the lives of African American women, the emphasis on "up-stream," environmental, contextual and structural risks are needed. It is important to acknowledge that factors that may seem 'distal' actually have an immediate impact on women's physical and sexual health. This project uniquely positions researchers for more in-depth qualitative work to understand community-level factors in relation to intimate partner violence and sexual health risk contexts, and for more inquiry into the emphasis community building and community empowerment will have on intervention follow-through and, ultimately, effectiveness.

### **ACKNOWLEDGEMENTS**

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