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Rapid Human Immunodeficiency Virus Testing and Risk Prevention in Residents of Battered Women's Shelters

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A B S T R A C T

Background: Human immunodeficiency virus (HIV) infection and intimate partner violence (IPV) are interconnected public health problems. However, few HIV prevention interventions address the unique needs of IPV survivors in shelter and none of the Centers for Disease Control and Prevention's best-evidence risk reduction interventions adequately explore the complex relationship between IPV and HIV risk. Although battered women's shelters provide a safe and supportive environment for women in crisis, most do not offer HIV risk reduction services or sexual safety planning.
Methods: This study evaluated the feasibility, acceptability, and initial efficacy of rapid HIV testing and brief risk prevention intervention developed for residents of battered women's shelters. The Safe Alternatives For Empowered sex for intimate partner violence intervention (SAFE-IPV) was evaluated in an open trial ($N = 98$). Participants were assessed with a series of standardized interviews and self-reports at screening and 3 months after leaving the shelter.
Results: Few eligible participants declined SAFE-IPV and participants who received SAFE-IPV reported high levels of satisfaction. No participants in the open trial tested positive for HIV. However, participants reported significantly fewer unprotected vaginal and anal sexual occasions and increased intentions to engage in risk preventative behaviors 3 months after leaving shelter compared with the 3 months before shelter. Additionally, participants reported significant improvements on HIV risk factors addressed in SAFE-IPV at the 3-month follow-up (i.e., reduced emotional, physical, and sexual harm by abuser, posttraumatic stress symptoms, hazardous alcohol use, and drug use).
Discussion: These results extend prior research on HIV prevention with women with IPV, demonstrating the acceptability, feasibility, and initial efficacy of SAFE-IPV within battered women's shelter settings.

More than 1.2 million people in United States are currently living with human immunodeficiency virus (HIV)/AIDS, 12.8% of whom are unaware of their HIV status (Centers for Disease Control and Prevention [CDC], 2015). Further, approximately 50,000 new cases of HIV are diagnosed annually (CDC, 2015). Women account for approximately 20% of new HIV infections annually, and more than 80% of new HIV infections in women are from heterosexual contact (CDC, 2015). Intimate partner violence (IPV) and HIV are parallel epidemics with interconnected risk factors in women (Phillips et al., 2014). IPV is highly prevalent in women, with approximately one in three women reporting rape, physical violence, and/or stalking by an intimate partner in their lifetime (Black et al., 2011).

Research has shown that IPV survivors compared with non-survivors are especially likely to engage in multiple HIV risk behaviors (e.g., coerced sexual violence by infected partner, limited skill in negotiating safe sex practices, unprotected sex, sex with risky partners, multiple sex partners, and injection drug

Dr. Dawn M. Johnson had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.
Conflicts of Interest: Dr. Zlotnick's husband was a consultant for Soberlink. All other authors declare that they have no conflicts of interest.

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use; McCree, Koenig, Basile, Fowller, & Green, 2015; Li et al., 2014; Phillips et al., 2014). Additionally, posttraumatic stress disorder (PTSD) and substance use disorder, which are common in IPV survivors, are associated with increased HIV risk behaviors (Cavanaugh, Hansen, & Sullivan, 2010; Harris et al., 2003; Phillips et al., 2014). IPV survivors also encounter distinct HIV risk factors, such as difficulty in negotiating condom use and other preventative sexual behaviors, out of fear of retaliation or being raped by their abusive partner (Li et al., 2014; McCree et al., 2015; Phillips et al., 2014).

Early knowledge of HIV status is critical to preventing transmission to others; to link HIV positive individuals with medical services that can reduce the morbidity, mortality, and cost of care; and ultimately to improve the quality of life of people living with HIV. However, a recent study found that almost one-half of women with histories of IPV have not been tested for HIV and thus do not know their HIV status (Rountree, Chen, & Bagwell, 2016). Although there is a significant need for HIV testing and preventative intervention for IPV survivors, few HIV prevention interventions incorporate tangible strategies to address IPV and none of the CDC's best evidence risk reduction interventions adequately explore the complex relationship between IPV and HIV risk (Prowse, Logue, Fantasia, & Sutherland, 2013).

Battered women's shelters (BWS), a primary resource for survivors of IPV, can provide an opportune setting for HIV testing and risk prevention (Cavanaugh et al., 2016). Women in shelters have already initiated a change in their life, and BWS provide a confidential, safe, supportive, and resource-rich environment where women can safely obtain test results, cope, and access treatment if HIV positive (Rountree, Goldback, Bent-Goodley, & Bagwell, 2011). However, in a study of 59 BWS, 54% did not disseminate HIV information to residents and only 17% offered testing or sexual safety planning (Rountree et al., 2011). More recently, Cavanaugh et al. (2016) conducted a needs assessment for HIV prevention services within BWS and found 92% of shelter staff reported that HIV interventions were never administered within the shelter and only 35% reported that they provide HIV educational materials to residents. Additionally, recent research suggests that BWS staff and residents are open and supportive of integrating HIV prevention interventions within BWS (Draucker et al., 2015). Specifically, they found that the ease and promise of quick results of rapid HIV testing was acceptable to BWS staff and residents. Further, results suggest that shelters may provide a safe and opportune time for HIV testing and prevention (Draucker et. al., 2015).

Although researchers have proposed adaptations of existing evidence-based HIV prevention programs specifically for BWS (e.g., Cavanaugh et al., 2016), to date, only one HIV prevention intervention for women with IPV has been empirically evaluated (Rountree, Bagwell, Theall, McElhaney, & Brown, 2014; Rountree & Mulraney, 2010). These investigators developed a 6-week, 2-hour-per-session curriculum that focused on capacity building, sexual safety planning, and life skills (Rountree & Mulraney, 2010). Although preliminary results were promising, only 54% of the intervention group completed the program (Rountree et al., 2014). The authors suggested a shorter duration of HIV interventions to accommodate the multiple demands on IPV survivors' lives.

The purpose of the current study was to explore the feasibility, acceptability, and initial efficacy of a rapid-HIV testing and brief (i.e., single session plus brief booster session) risk prevention intervention specifically developed for residents of BWS, "Safe Alternatives For Empowered sex for IPV" (SAFE-IPV), that focused on reducing high-risk behavior after leaving shelter. Our primary outcome was the number of unprotected vaginal or anal sexual occasions. Secondary outcomes included intentions to engage in risk-preventative behaviors, as well as other HIV risk factors documented in the literature and addressed in the intervention (i.e., IPV, PTSD, and alcohol and drug use). Satisfaction with the intervention was also assessed. If the feasibility, acceptability, and preliminary efficacy of SAFE-IPV is supported, it could serve as a model for future efforts to integrate HIV prevention interventions in BWS.

Intervention Development

Originally, the basis for SAFE-IPV was RESPECT (Metcalf et al., 2005), a 40-minute individual-level, client-focused HIV prevention intervention based in the theory of reasoned action and social cognitive theory. We expanded RESPECT to address the unique needs of survivors of IPV. However, after completing several focus groups (Draucker et al., 2015) and an open trial, it became clear that a core component of RESPECT (i.e., focusing on the individuals' state of conflict and creating cognitive dissonance between her beliefs and behavior) was not well-tolerated by IPV survivors. Thus, SAFE-IPV maintained the overall structure of RESPECT (i.e., orientation to rapid HIV testing, discussion of most recent risk incident, creation of a risk reductions step or plan [RRP], provision of test results, and revision of RRP), but drew more on empowerment theory (Cattaneo & Chapman, 2010), and included several additional components to meet the unique needs of IPV survivors in a shelter.

The SAFE-IPV is a 90-minute intervention that focuses on the participants' emotional safety and sexual empowerment. SAFE-IPV begins with an orientation to rapid HIV testing, including an assessment of the participants' safety and comfort level for testing in the shelter. The rapid HIV test was administered only if both the participant and interventionist agreed it was the right decision for the participant. After the collection of an oral specimen for HIV testing, the session turned to an assessment of the participants' HIV risk behaviors. This discussion included education and assessment of IPV-related risks, feedback regarding their substance use and PTSD symptoms and how this may impact their risk, assessment of partner-related risks (i.e., increased risk for intravenous drug use, multiple sexual partners), and assessment of safety concerns and how they may impact risk (e.g., implications of asking abuser to wear a condom). Safety planning, including sexual safety planning, was incorporated throughout the intervention protocol.

After a thorough understanding of the participant's primary risk factors for HIV and other sexually transmitted infections (STIs), the most recent risk incident is identified and assessed, as are recent efforts to reduce risk for HIV/STI. Rather than highlighting the cognitive dissonance between a participants' behavior and beliefs, SAFE-IPV validates a woman's behavior within the context of her experience of IPV and focuses on helping her to identify aspects of her risk that are under her control, empowering women to identify strategies where they can take control of their sexual health. This process includes education on the female condom as a way women can take control of their sexual health and addresses safety risks that may result from asking an abusive partner to wear a condom. Additionally, participants are provided female condoms and encouraged to use them with future sexual partners. Barriers to risk reduction, including IPV, substance use, and PTSD symptoms, are discussed, as are strategies to reduce those risks. Triggers to risk