



# HHS Public Access

Author manuscript

*AIDS Educ Prev.* Author manuscript; available in PMC 2014 November 01.

Published in final edited form as:

*AIDS Educ Prev.* 2014 October ; 26(5): 383–397. doi:10.1521/aeap.2014.26.5.383.

## **BARBERSHOP TALK WITH BROTHERS: USING COMMUNITY-BASED PARTICIPATORY RESEARCH TO DEVELOP AND PILOT TEST A PROGRAM TO REDUCE HIV RISK AMONG BLACK HETEROSEXUAL MEN**

**Dr. Tracey E. Wilson, PhD,**

SUNY Downstate Medical Center, School of Public Health, Brooklyn, New York. Brooklyn Health Disparities Center

**Dr. Marilyn Fraser-White, MD,**

Arthur Ashe Institute for Urban Health, Brooklyn, New York. Brooklyn Health Disparities Center

**Kim M. Williams, PhD,**

Centers for Disease Control and Prevention, Atlanta, Georgia

**Angelo Pinto, JD,**

Correctional Association of New York, New York, New York

**Francis Agbetor,**

Arthur Ashe Institute for Urban Health, Brooklyn, New York

**Brignel Camilien,**

Arthur Ashe Institute for Urban Health, Brooklyn, New York

**Kirk Henny, PhD,**

Centers for Disease Control and Prevention, Atlanta, Georgia

**Dr. Ruth C. Browne, ScD,**

Arthur Ashe Institute for Urban Health, Brooklyn, New York. Brooklyn Health Disparities Center

**Dr. Yolene Gousse, DrPH, MPH,**

SUNY Downstate Medical Center, STAR Program, College of Medicine, Brooklyn, New York. Brooklyn Health Disparities Center

**Tonya Taylor, PhD,**

SUNY Downstate Medical Center, STAR Program, College of Medicine, Brooklyn, New York

**Humberto Brown,**

Arthur Ashe Institute for Urban Health, Brooklyn, New York

**Raekiela Taylor, PhD, and**

Centers for Disease Control and Prevention, Atlanta, Georgia

---

© 2014 The Guilford Press

Address correspondence to Tracey E. Wilson, PhD, School of Public Health, Mail Stop Code 43, State University of New York, Downstate Medical Center, 450 Clarkson Av., Brooklyn, NY 11203; Tracey.Wilson@downstate.edu.

**Dr. Michael A. Joseph, PhD, MPH**

SUNY Downstate Medical Center, School of Public Health, Brooklyn, New York. Brooklyn Health Disparities Center

**Abstract**

There is a need for feasible, evidence-based interventions that support HIV risk reduction among heterosexual Black men. In this article, we describe the process for development of the Barbershop Talk With Brothers (BTWB) program and evaluation. The BTWB program is a theoretically grounded and community-based HIV prevention program that seeks to improve individual skills and motivation to decrease sexual risk, and that builds men's interest in and capacity for improving their community's health. Formative data collection included barbershop observations and barber focus groups, brief behavioral risk assessments of men in barbershops, and focus groups and individual interviews. Based on this information and in consultation with our steering committee, we developed the BTWB program and accompanying program evaluation. From April through November 2011, 80 men were recruited and completed a baseline assessment of a pilot test of the program; 78 men completed the program and 71 completed a 3-month assessment. The pilot evaluation procedures were feasible to implement, and assessments of pre- and post-test measures indicate that key behavioral outcomes and proposed mediators of those outcomes changed in hypothesized directions. Specifically, attitudes and self-efficacy toward consistent condom use improved, and respondents reported lower levels of sexual risk behavior from baseline to follow-up (all  $p < 0.05$ ). Perceptions of community empowerment also increased ( $p = 0.06$ ). While HIV stigma decreased, this difference did not reach statistical significance. Our approach to community-engaged program development resulted in an acceptable, feasible approach to reaching and educating heterosexual Black men about HIV prevention in community settings.

---

In 2011, Black men in the United States (including African American men as well as Caribbean-born and other groups of men who identify as Black) had the highest HIV diagnosis rate (112.8 per 100,000) among men and women of all other racial and ethnic backgrounds (Centers for Disease Control and Prevention [CDC], 2013) and it is expected that 1 in 22 Black men and women will be diagnosed with HIV in their lifetime (CDC, 2010). Although most of the HIV diagnoses among Black men are attributed to sexual transmission between men, nearly a quarter (23%) of HIV transmissions to Black men are classified as being accounted for by heterosexual contact (CDC, 2011b). In 2011, there were an estimated 3,124 HIV diagnoses attributable to heterosexual contact among Black men versus 537 among White men (CDC, 2013). The difference in numbers of diagnoses is particularly alarming when considered in light of the fact that Black men and women make up only 14% of the population (U.S. Census Bureau, 2013).

There have been significant contributions made in our understanding of how best to reduce HIV risk across a broad number of populations, including youth, women, injection drug users, and men who have sex with men. A review of meta-analyses and literature reviews on primary HIV prevention reveals a lack of evidence-based programs for heterosexual Black men (Burton, Darbes, & Operario, 2010; Crepaz et al., 2007; Darbes, Crepaz, Lyles, Kennedy, & Rutherford, 2008; Herbst et al., 2007; Johnson, Scott-Sheldon, & Carey, 2010;

Johnson et al., 2008; Noar, 2008; Noar, Palmgreen, Chabot, Dobransky, & Zimmerman, 2009; Scott-Sheldon, Huedo-Medina, Warren, Johnson, & Carey, 2011; Vergidis & Falagas, 2009). Interventions such as those described in the VOICES/VOCES program (O'Donnell, O'Donnell, San Doval, Duran, & Labes, 1998), project RESPECT (Kamb et al., 1998), the OPNS study (Wilson et al., 2009), and the NIA study (Kalichman, Cherry, & Browne-Sperling, 1999) have been demonstrated to be effective in reducing sexual risk behaviors among populations that include heterosexual adult Black men. However, there is a gap in effective interventions tailored specifically to the needs of these men, particularly since most programs evaluating the impact of risk reduction among those men have taken place at HIV/STD testing or treatment sites (Darbes et al., 2008; Henny et al., 2012; Herbst et al., 2007; Kalichman et al., 1999; Kamb et al., 1998; O'Donnell et al., 1998; Wilson et al., 2009).

This distinction is important, given that men presenting for care at STD clinics represent only a small percentage of those in need of HIV prevention services. The vast majority of sexually transmitted diseases (STDs) are diagnosed in venues other than STD clinics (Brackbill, Sternberg, & Fishbein, 1999; Parrish & Kent, 2008). Further, many men diagnosed with HIV do not have a recent STD history (CDC, 2011a). Therefore, HIV prevention efforts need to supplement clinic-based with community-based efforts in order to effectively reach those in need.

As an alternative to clinic-based approaches, our program team developed the Barbershop Talk with Brothers (BTWB) program to address the HIV prevention needs of heterosexual Black men in the borough of Brooklyn, NY. BTWB seeks to involve barbershops as a vehicle to recruit men at risk for HIV infection and as a venue for intervention delivery. Several studies have explored incorporating barbershops into public health efforts (Brackbill et al., 1999; CDC, 2011a; Henny et al., 2012; Parrish & Kent, 2008; Releford, Frencher, & Yancey, 2010). Barbershops are a trusted place where Black men gather socially and thus have the potential to serve as a bridge to health care screening and referral (Hart et al., 2008; Luque et al., 2010; Releford, Frencher, & Yancey, 2010; Releford, Frencher, Yancey, & Norris, 2010). Barbershops are increasingly being used as a site for outreach and health promotion activities. It has been demonstrated that barbers are willing to engage in health education activities with their clients (Brawner et al., 2013; Fraser et al., 2009) and that barbershops are feasible and acceptable venues for health education activities among barbershop patrons (Linnan et al., 2011). Further, the Texas-based BARBER-1 Study demonstrated the feasibility and effectiveness of engaging barbershops in screening for high blood pressure, monitoring, and referral (Victor et al., 2011). To date, however, few barbershop-based interventions have been rigorously tested.

The BTWB program builds upon a rich history of community-academic partnerships between several institutions and businesses, including the Arthur Ashe Institute for Urban Health, Inc. (AAIUH), the State University of New York, Downstate Medical Center, and local businesses and programs that serve the borough of Brooklyn, NY. The organizations and programs involved in this partnership are located in and serve neighborhoods with a high burden of HIV disease. We applied principles of community-based participatory research (Israel, Schulz, Parker, & Becker, 1998) to design and implement a culturally- and

linguistically-appropriate response for HIV prevention among heterosexual adult Black men. In designing BTWB, we sought to: build upon men's strengths and community contributions, to tailor messages to the unique needs of Black heterosexual men; maximize the potential public health impact; and build a project that is both acceptable and feasible to implement.

In this paper, we describe the process for development of BTWB, key evaluation measures, and findings from the pilot study. This work served as a foundation for a more rigorous evaluation of the program, which is currently being conducted within the context of a cluster randomized trial.

## METHODS

### BTWB PROGRAM DEVELOPMENT

**Program Team**—To ensure that program development was relevant and consistent with the needs and values of our priority population, we established a Steering Committee. This committee consisted of barbers and barbershop owners; an HIV outreach worker; a physician with over 40 years of experience providing care in the community; a pastor; and Black men who live in the community, frequent area barbershops, and represent our priority population. At the time of the study, all Steering Committee members lived in and/or provided services in Brooklyn and had a deep understanding of and connection with the community for whom the program was being developed. The Steering Committee provided suggestions for approaches to recruitment and retention, offered valuable feedback on evaluation measures and intervention components, and worked with us on naming the project. When key objectives for the program were developed, the committee was vocal in guiding the investigators to minimize the burden on the barbers in their delivery of the intervention, on whether intervention delivery should be in multiple sessions or a single session, and in terms of what type of graphics and health education materials would be appropriate for barbers and in barbershops. We also received input from colleagues at the Centers for Disease Control and Prevention.

Our program team developed a set of guiding principles that helped to facilitate intervention development and establish a sense of cohesiveness within our program team. These principles included: a commitment to avoiding reinforcement of stereotypes of Black men; the importance of a strengths-based perspective that acknowledges and capitalizes on men's roles as providers and leaders in the community; a view of health that incorporates the social determinants of HIV risk along with behavioral risk factors; and development of an approach that leverages the natural roles of barbers as community supporters and advisors. Our goal therefore was not just to change individual-level risk, but also to build community empowerment in support of better overall health.

**Location**—The study was conducted in partnership with barbershops situated in the neighborhoods of East Flatbush, Flatbush, and Bedford-Stuyvesant. These neighborhoods have some of the highest rates of HIV incidence among Black men in New York City (New York City Department of Health [NYCDOH], 2010). For the formative phase of intervention development, men were recruited from four barbershops and completed study

activities both in the barbershop (a brief quantitative risk assessment) and off-site at either SUNY Downstate or at AAIUH (focus groups and individual interviews); in-depth analyses of these qualitative data are reported elsewhere (Taylor et al., in press). For the pilot test of the program, we recruited an additional seven barbershops (eleven in all) and completed program activities in a small group format either at participating barbershops or in offices at SUNY Downstate or AAIUH.

**Formative Phase of Program Development**—To inform the content of the program, we utilized a sequential, mixed methods approach in which eligible men first completed a brief quantitative risk assessment delivered in barbershops. Eligible participants included men ages 18–45, who identify as Black or African American, and who reported at least one female partner in the past 3 months. Among 122 men screened, 86% ( $N = 105$ ) were eligible and agreed to participate. Participants completed audio computer-assisted self-interviews (ACASI) in barbershops, using privacy screens and headphones to protect participant privacy. From the men who completed the ACASI, we then purposively selected a subgroup of men for participation in focus groups and individual interviews. Men were ineligible to participate in the focus groups and interviews if they reported injection drug use in the past 3 years, oral or anal sex with a man in the past 5 years, or involvement in an HIV or substance use prevention study in the past 6 months. Sixty of the 105 were eligible for focus group and individual interviews based on these criteria. We then used data from the ACASI to purposefully select a subset of 22 of these 60 men to represent diversity in age, levels of sexual risk, and country of origin. Of the 22 participants selected, 8 chose to participate in focus groups only, 1 in an interview only, and 13 in both focus group and individual interviews. Participants completing the ACASI were provided a \$20 gift certificate that could be used toward services at the participating barbershop. Focus group participants were provided \$60 plus a \$10 barbershop gift certificate; participants in the in-depth interviews were also provided \$60 plus the \$10 certificate.

Topics included masculinity, partner selection and networks, sexual risk behaviors, attitudes, beliefs and intentions regarding HIV-testing and condom use, myths and stigma surrounding HIV, and suggestions for program development. The focus group questions targeted a general understanding of these topics among Black heterosexual men, while the individual interviews focused more specifically on the participant's individual experiences.

Qualitative data were transcribed, subjected to thematic analysis, and coded by one member of the SUNY team and three members of our AAIUH team. AAIUH team members were trained in qualitative research methods as part of this project. Themes linked to risk included low HIV transmission knowledge, low perceived HIV risk, higher emotional attachment/trust with a partner, heat of the moment/impulsive decision making, and concerns regarding discussing safer sex, particularly with long-standing partners when involved in concurrent sexual relationships. Participants also spoke of their perceptions of masculinity and their roles as protectors and gatekeepers in the community, the need for HIV prevention activities that originate from trusted sources in the community, and the expressed willingness to advocate for change. Details on the methods and key findings from the formative phase have been previously described (Taylor et al., in press).

We also conducted a focus group with five barbers and barbershop owners to gain insights on what could be feasibly implemented and housed within barbershops. Although we had originally thought that barbers would serve as interventionists for the program, both the barbershop focus group findings and feedback from our steering committee identified the need not to burden the barbers, but to instead utilize their trusted roles in the community as a conduit to the program through referrals, to provide pared-down messages surrounding HIV prevention and communicative strategies to discuss HIV naturally within the context of a client/barber interaction, and to reinforce messages provided in the BTWB program. We also gained insight into the fact that barbers wanted and would need considerable support in terms of health education to be able to speak accurately and with confidence to clients if they were to provide a supporting role in program activities.

**Approach to Program Development**—As part of our collaborative process, the formative program team utilized an Intervention Mapping process (Bartholomew, Parcel, & Kok, 1998) to develop a matrix of objectives for the program, select strategies and approaches to meeting objectives, and develop the intervention components. At each of these steps, we engaged core Intervention Mapping processes of reviewing previous research, incorporating theory, and applying the formative findings. We applied Social Cognitive Theory (Bandura, 2001, 2004) as a theoretical basis for program development, given that there are clear intrapersonal factors (e.g., condom use attitudes, condom use self-efficacy) and features of the social environment (e.g., community empowerment, HIV stigma) that impact HIV risk among Black heterosexual men, and these factors influence one another continuously and dynamically over time (Poundstone, Strathdee, & Celentano, 2004). The concept of a reciprocal relationship between individual characteristics and the environment in which risk occurs is a central tenet of Social Cognitive Theory. We therefore developed program components that not only sought to improve attitudes and build skills around safer sexual behavior but that also aimed to reduce HIV stigma and improve collective efficacy for community changes related to HIV risk. HIV stigma toward persons with HIV/AIDS has been shown to be a factor that can mitigate safer sex and HIV testing outcomes in prevention trials (Mahajan et al., 2008). The entire program was iteratively pre-tested and modified prior to pilot testing in focus groups reflecting our priority population.

**The BTWB Program**—The BTWB program takes place in a single group session, divided into three modules—Module 1: Wake Up, Module 2: Gear Up, and Module 3: Build Up (Table 1). The program takes less than two hours to administer. Each module provides opportunities for skills building and feedback and includes written support materials. We used the concept of a “fire” as a metaphor to underpin the modules, moving from the example of community efforts to put out real fires to introducing the concept of public health problems as less visible fires that both impact the community and that can be addressed by the community. HIV is then discussed as one particular fire that engulfs many Black communities and that can be extinguished through social action and personal risk reduction.

The Wake Up module promotes community responsibility and motivation to engage in health promotion with men and women in the participant’s social network. In this module,

participants are oriented to the program objectives and ground rules for participation. Participants discuss the theme of the module, which is to wake up to the fire of local community health problems and of HIV specifically; the fire metaphor seeks to demonstrate to men how their natural inclination to take care of others (i.e., how they would react if they witnessed their next-door neighbor's house on fire) can be applied in the service of other, less visible problems. During this module, participants engage in discussions of how they view themselves as men in our society, and explore the idea of how different conceptualizations of masculinity may influence men's health risk or protective behaviors (e.g., whether it is seen as a weakness or vulnerability to go to a doctor, how being a protector of others necessitates being healthy). Discussions of health also focus on social networks, and how to comfortably leverage these networks to improve community health. During this module we discuss men's ability and motivation to address health, and discuss a movement in Brooklyn toward control of the community's own health.

The Gear Up module introduces a specific fire of HIV that is damaging the community's health. The module objectives are to promote understanding of HIV prevention and increase perceptions of the threat of HIV, while also increasing outcome expectancies and self-efficacy related to condom use to reduce that threat. This module addresses the local epidemiology of HIV/AIDS, highlighting the burden of heterosexually transmitted infection in the area, and includes discussions about the role of community stigma as a barrier to effectively battle HIV/AIDS. The module also includes a section on truths and misconceptions about HIV transmission. The discussion of HIV transmission addresses modes of HIV transmission and correction of misconceptions that arose during the formative work (e.g., HIV is not transmitted during anal sex between men and women; all HIV transmissions are the result of men's drug use or same sex behavior; a "quickie" without a condom does not put you at risk for HIV). Different types of condoms and lubricants are reviewed and instructions and demonstrations are provided on the proper use of condoms. This module incorporates methodologies that have been shown to be standard components of effective HIV interventions (Albarracin et al., 2005), but also integrates messages that emerged from our formative research that speak specifically to local concerns and beliefs surrounding condom use, HIV testing, and HIV transmission.

The third module, Build Up, prepares participants to take what was learned in the prior modules and share it with sexual partners and others in their social network. The objective of this module is to provide men with the motivation and skills to share and communicate effectively the information that they learned about HIV with their sexual partners as well as throughout their community through exercises and feedback (Patterson, Grenny, McMillan, & Switzler, 2002). This module includes role play with scenarios that were developed based on stories of risk that were presented during our formative work. These involve varied physical and emotional contexts of risk, including sexual risk as a function of emotional motivations (e.g., anger, loneliness), high-risk interactions (e.g., sexual pressures from female partners to not use condoms, a theme which came up frequently in our formative work), and high-risk settings (e.g., when there is limited perceived time or opportunity to have sex, in clubs, etc.). As part of this module, men are asked to develop and commit to a step that they could take to reduce their risk of HIV or that could help reduce risk for someone they know. Participants are encouraged to maintain contact with the program team

after completion of the module in order to have additional questions answered and to receive support and encouragement.

**Barber Training**—To successfully implement the BTWB program, we needed to ensure that barbers were prepared to deliver HIV messages and refer clients to the BTWB program (e.g., it is important to know your HIV status, it is important to protect yourself and partner by using condoms). On-site trainings with participating barbers and other barbershop personnel were conducted within each participating barbershop. The trainings consisted of an overview of the project and methods, participation in the BTWB intervention, and training on methods to encourage their clients' participation in the program. In addition, each barber was provided with a workbook, summarizing key information from the BTWB program. Barbers were also provided with T-shirts, buttons, and barber capes branded with the BTWB logo, and condoms to distribute at the barbershops. Throughout a barbershop's participation in the BTWB program, barbers received ongoing support from field staff.

### BTWB PILOT TESTING

**Barber Training**—Of the 11 shops whose owners originally agreed to participate, we completed training at 10 (one shop owner dropped out after determining that he did not have the capacity to house program activities). At those 10 shops, we trained 30 of the 39 employees. Barbers were compensated \$40 for their participation in the training.

**Recruitment**—Following training at each barbershop, we began pilot recruitment. To increase the likelihood that our recruited sample represented the population of barbershop clients, we varied recruitment times at sites to include weekday and weekend shifts, each with a daytime and evening recruitment period. Customers were introduced to study staff by their barber and asked whether they would be willing to meet with our research assistant to screen for the study. The research assistant described the study and assessed eligibility via an ACASI screening form. All eligible participants who were interested in participating provided individual, written informed consent. Men were eligible for participation in the pilot study if they reported on the ACASI screening form that they were 18–45 years old, self-identified as an African American or Black man, and reported unprotected vaginal or anal intercourse with two or more women in the past 3 months. Men were excluded if they could not complete study activities in English, were HIV-positive, reported any injection drug use in the past 3 years, reported any oral or anal sex with a man in the past 5 years, or participated in any HIV or substance use research in the past 6 months (including participation in the formative phase of our study). We excluded HIV-positive men due to the different types of messages that are offered in HIV primary prevention interventions, versus those that prioritize HIV-positive participants (e.g., medication adherence, etc.). Participants were provided \$20 for participation in the BTWB program; they also received \$20 for completing the baseline assessment and \$30 for the follow-up assessment. In addition, participants were reimbursed up to \$20 for transportation costs to and from the study site. All procedures, including those of the formative phase, were approved by the Institutional Review Boards at SUNY Downstate



**Pilot Evaluation**—Following the consent procedure, participants completed an ACA-SI-administered baseline assessment, participated in the BTWB program, and then completed a 3-month follow-up ACASI assessment; the window for the 3-month follow-up was 11 to 14 weeks from baseline. The baseline assessment was completed either at the barbershop on the day of screening or on the day of the BTWB program. The BTWB program was administered either at the barbershop during a time that it was closed to customers or in a private room within the Arthur Ashe Institute of Urban Health. To reduce bias, project staff responsible for recruiting and administering evaluation assessments did not administer program activities. Our main outcome measure was unprotected vaginal or anal sex with a female partner over the past 3 months. To create this variable, we asked men to report whether they had any main partners in the past 3 months, and if they did to report whether there was at least one time when they did not use condoms during vaginal or anal sex. These questions were repeated for casual partners (Lansky, Thomas, & Earp, 1998). Those who reported having at least one unprotected episode with either main or casual partners were coded as having unprotected vaginal or anal sex. We also asked men about whether they had engaged in unprotected sex with two or more women in the past 3 months. The 3-month time frame for recall of behaviors is short enough to minimize memory distortions, but long enough to allow for an accurate picture of sexual behavior over time (Jaccard & Wan, 1995).

We also assessed a set of mediating variables, as defined by Social Cognitive Theory. To assess attitudes toward condom use, we asked men to report how favorable they felt about always using condoms with main female sexual partners in the next 3 months; 7-point response options ranged from extremely unfavorable to extremely favorable; this question was repeated for casual sexual partners. The responses to these two questions were then combined such that those who reported being extremely or moderately favorable to always using condoms in the next 3 months with both main and casual partners were categorized as having favorable attitudes toward condom use, as compared to those who reported being only slightly favorable, unsure, or responding in the unfavorable range with either main or casual partners. To assess self-efficacy for condom use, we asked men to report how confident they felt about always using condoms with their female main sexual partners in the next 3 months; 7-point response options ranged from extremely unconfident to extremely confident; this question was repeated for casual partners. Those who reported that they were extremely or moderately confident in their ability to use condoms with both main and casual partners were categorized as having adequate self-efficacy for condom use, as compared with those who reported being slightly confident, unsure, or reporting a lack of confidence with either main or casual partners. We assessed variables related to community empowerment using a 5-item Likert scale developed and validated by Barbara Israel and colleagues (Israel, Checkoway, Schulz, & Zimmerman, 1994); higher scores on the scale indicate higher empowerment (range = 6–25; Cronbach's alpha among respondents at baseline = 0.73). In addition, we assessed HIV-related stigma using another widely implemented and validated 11-item Likert scale (Darrow, Montanea, & Gladwin, 2009; Herek, 2002; Herek, Capitanio, & Widaman, 2002), with higher scores indicating higher stigma (range = 11–55; Cronbach's alpha at baseline = 0.89). We conducted a paired-samples *t*-test for the comparisons of stigma and empowerment in the pre- and post-test

period, and McNemar's test for assessments of changes in behavioral measures and for the assessments of condom use attitudes and self-efficacy.

## RESULTS

From April to September 2011, we screened 568 men across 10 barbershops. Of the 568 men screened, 139 (25%) were eligible. Of the 429 ineligible men, 415 were deemed ineligible because they did not report two or more sexual partners in the past 3 months, the remaining 14 men were excluded based on one or more of our other criteria. Eighty men completed a baseline assessment, and 78 men participated in one of the available 19 BTWB single-group sessions; 71 men completed a 3-month assessment. The remaining men who agreed to participate were not available to attend sessions during the brief active intervention phase of the pilot test.

The average age of the men at baseline was 24 (range: 18–43), 73% were born in the U.S., and 24% were born in the Caribbean. All men reported being Black or African American and 7.5% reported Latino ethnicity. Fifty-six percent of the men were not employed at the time of the study, 31% worked full-time, and 13% worked part-time. Over half (56%) reported ever having spent at least one night in prison or jail. In the past 3 months, 27.5% reported not having enough money in their household for food, rent, or utilities often or fairly often. Forty-one percent of men reported 2–3 female sexual partners in the past 3 months at baseline; 19% reported 4–5 partners, and 25% reported 6+ partners; the remainder reported one or no partners.

We found that the proportion of men who reported not having engaged in any unprotected sex in the past 3 months increased from the baseline to the follow-up administration (25% to 41%,  $p = 0.007$ ). Similarly, the proportion of men who reported having unprotected sex with two or more women in the past 3 months declined from baseline to follow-up (46% to 17%,  $p = 0.0001$ ). The proportion of men reporting favorable attitudes toward condoms and confidence in their self-efficacy to use condoms consistently increased from baseline to 3-month follow-up ( $p < 0.05$ ). While BTWB participants reported increased perceptions of community empowerment ( $p = 0.06$ ) from baseline to follow-up, no differences were detected in HIV stigma ( $p = 0.11$ ). Baseline and follow-up assessments of condom use attitudes, self-efficacy and behavior are presented in Table 2, along with scores for HIV stigma and community empowerment.

## DISCUSSION

Unacceptable HIV disparities exist between White and Black heterosexual men in terms of HIV morbidity and mortality (CDC, 2011b). Despite the need for effective risk-reduction approaches, few community-based resources exist to help reduce HIV/AIDS risk among Black heterosexual men who do not inject drugs and who are at risk primarily due to unprotected sex with multiple or concurrent female sex partners. In response to this need, we conducted community-based, formative research in the service of intervention development with and for heterosexually active African American men recruited from barbershops located in urban, low-income areas with high HIV morbidity and mortality.

Initial comparisons of self-reported behaviors indicate that our program may have an impact on condom use behaviors in this population. We also found support for the program's impact on theoretically derived predictors of behavior, including condom use attitudes and condom use self-efficacy. In the absence of a control group and given our inclusion criteria, these results could simply reflect regression to the mean or could be explained by several other threats to validity. However, they can be taken as a positive sign to continue with a more rigorous evaluation of the BTWB program.

It has been suggested that Black populations exhibit higher levels of homophobia and stigma associated with HIV/AIDS as compared to white populations. For instance, in the General Social Survey, the proportion of Black men and women who indicated that homosexuality was 'always wrong' was 72% in 2008 as compared to 52% among White respondents (Glick & Golden, 2010). Further, HIV stigma is considered to be linked to lower rates of HIV testing, and lower responsiveness to HIV prevention efforts (Barker et al., 2012; Darrow et al., 2009; Mahajan et al., 2008). Although our study was not designed to detect differences in variables across time nor to allow causal inferences between the intervention and outcomes, the preliminary evidence suggests that our program may not be effective in shifting men's HIV stigma. In general, scientifically rigorous evaluations of interventions designed to decrease HIV-related stigma are lacking, and have not included community-based samples of heterosexual Black men (Sengupta, Banks, Jonas, Miles, & Smith, 2011). Further work is required to refine intervention components to help move attitudes of heterosexual Black men toward greater tolerance of those living with HIV.

A limitation of the pilot evaluation is the reliance on self-report measures of sexual risk behavior and associated predictors of risk, which are prone to self-report bias. We engaged in several activities to reduce bias, such as (1) assuring men of the confidentiality of their responses and explaining the system that we used to protect data, (2) stressing the importance of honest answers for the purpose of informing community health initiatives, and (3) using ACASI to increase the respondent's sense of privacy. However, we recognize that despite these efforts, the self-reported outcomes may still be biased.

In addition, there were distinct discrepancies in sexual risk behavior in the screening form as compared to the baseline assessment of the pilot evaluation. Although all men reported having unprotected vaginal or anal sex with two or more women in the last 3 months as a condition for eligibility on the screening form, this number dropped to 46% on the baseline assessment. Several factors could account for this. First, for some of the men, the baseline assessment occurred several weeks after screening, to coincide with timing of the intervention. It may be, therefore, that the difference reflects real changes in risk behavior, in that we may have captured screening data at a period of time characterized by a spike in sexual behavior. Second, given the popularity of the program and that recruitment took place in the barbershops, there is a risk that men became aware of the study entry criteria and adjusted their answers to the screening form in order to qualify for study participation. While a third explanation could be that these self-reports reflect a community level reduction in sexual risk, we believe that it is unlikely that such a sharp decline in sexual risk have taken place at a population level over such a short time period.

Finally, we note that one quarter of the men approached were eligible to participate and that eligibility included self-reported unprotected sex with two or more women in the past 3 months. While this supports an approach to HIV prevention which focuses on reaching heterosexual Black men in barbershops located in neighborhoods with high HIV burden, we also note the substantial effort involved. We required 6 months to recruit 80 men in 10 shops; and substantial additional time was required to build relationships with new barbershops, develop agreements regarding study activities, and train the personnel at participating shops. Our full evaluation of the program will lend a further perspective on the costs and effort required to conduct this type of intervention in comparison to the benefits derived in terms of HIV prevention.

## CONCLUSIONS

The pilot test of the Barbershop Talk with Brothers provided important information to support continued and more rigorous evaluation of the program. In particular, the pilot study demonstrated that (1) barbershops are willing to engage in a partnership to reduce HIV infection among their clients, (2) through barbershop outreach we are able to enroll men who are at increased risk for heterosexual HIV transmission, (3) that our collaborative approach to program implementation is feasible, that (4) our ACASI-based screening and evaluation procedures are feasible, and (5) that the program has potential effectiveness. Further testing of the program in the context of a controlled trial will help shed light on the effectiveness of these types of approaches in creating and maintaining lower HIV transmission risk behaviors.

## Acknowledgments

This study was supported by a cooperative agreement from the CDC (PS000691) and by the National Institute on Minority Health and Health Disparities (P20MD006875, subproject 5174). The contents of this publication are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Centers for Disease Control and Prevention (CDC) or the National Institutes of Health (NIH). The authors would like to thank the barbers, barbershop owners and managers, and our program steering committee for their contributions to this work.

## References

- Albarracin D, Gillette JC, Earl AN, Glasman LR, Durantini MR, Ho MH. A test of major assumptions about behavior change: A comprehensive look at the effects of passive and active HIV-prevention interventions since the beginning of the epidemic. *Psychological Bulletin*. 2005; 131:856–897. [PubMed: 16351327]
- Bandura A. Social cognitive theory: An agentic perspective. *Annual Review of Psychology*. 2001; 52:1–26.
- Bandura A. Health promotion by social cognitive means. *Health Education & Behavior*. 2004; 31:143–164. [PubMed: 15090118]
- Barker DH, Swenson RR, Brown LK, Stan-ton BF, Venable PA, Carey MP, et al. Blocking the benefit of group-based HIV-prevention efforts during adolescence: The problem of HIV-related stigma. *AIDS and Behavior*. 2012; 16:571–577. [PubMed: 22170381]
- Bartholomew LK, Parcel GS, Kok G. Intervention mapping: A process for developing theory- and evidence-based health education programs. *Health Education & Behavior*. 1998; 25:545–563. [PubMed: 9768376]
- Brackbill RM, Sternberg MR, Fishbein M. Where do people go for treatment of sexually transmitted diseases? *Family Planning Perspectives*. 1999; 31:10–15. [PubMed: 10029927]

- Browner BM, Baker JL, Stewart J, Davis ZM, Cederbaum J, Jemmott LS. “The black man’s country club”: Assessing the feasibility of an HIV risk-reduction program for young heterosexual African American men in barbershops. *Family & Community Health*. 2013; 36:109–118. [PubMed: 23455681]
- Burton J, Darbes LA, Operario D. Couples-focused behavioral interventions for prevention of HIV: Systematic review of the state of evidence. *AIDS and Behavior*. 2010; 14:1–10.10.1007/s10461-008-9471-4 [PubMed: 18843530]
- Centers for Disease Control and Prevention. Estimated lifetime risk for diagnosis of HIV infection among Hispanics/Latinos—37 states and Puerto Rico, 2007. *MMWR Morbidity and Mortality Weekly Report*. 2010; 59:1297–1301. [PubMed: 20948507]
- Centers for Disease Control and Prevention. Characteristics associated with HIV infection among heterosexuals in urban areas with high AIDS prevalence—24 cities, United States, 2006–2007. *MMWR Morbidity and Mortality Weekly Report*. 2011a; 60:1045–1049. [PubMed: 21832975]
- Centers for Disease Control and Prevention. Disparities in diagnoses of HIV infection between blacks/African Americans and other racial/ethnic populations—37 states, 2005–2008. *MMWR Morbidity and Mortality Weekly Report*. 2011b; 60:9398.
- Centers for Disease Control and Prevention. HIV Surveillance Supplemental Report. Vol. 23. Atlanta, GA: Author; 2013. Diagnoses of HIV infection and AIDS in the United States and dependent areas, 2011.
- Crepaz N, Horn AK, Rama SM, Griffin T, Deluca JB, Mullins MM, Aral SO. The efficacy of behavioral interventions in reducing HIV risk sex behaviors and incident sexually transmitted disease in black and Hispanic sexually transmitted disease clinic patients in the United States: A meta-analytic review. *Sexually Transmitted Diseases*. 2007; 34:319–332. [PubMed: 17038965]
- Darbes L, Crepaz N, Lyles C, Kennedy G, Rutherford G. The efficacy of behavioral interventions in reducing HIV risk behaviors and incident sexually transmitted diseases in heterosexual African Americans. *AIDS*. 2008; 22:1177–1194. [PubMed: 18525264]
- Darrow WW, Montanea JE, Gladwin H. AIDS-related stigma among Black and Hispanic young adults. *AIDS and Behavior*. 2009; 13:1178–1188. [PubMed: 19680800]
- Fraser M, Brown H, Homel P, Macchia RJ, LaRosa J, Clare R, et al. Barbers as lay health advocates—Developing a prostate cancer curriculum. *Journal of the National Medical Association*. 2009; 101:690–697. [PubMed: 19634590]
- Glick SN, Golden MR. Persistence of racial differences in attitudes toward homosexuality in the United States. *Journal of Acquired Immune Deficiency Syndromes*. 2010; 55:516–523. [PubMed: 20838226]
- Hart A Jr, Underwood SM, Smith WR, Bowen DJ, Rivers BM, Jones RA, et al. Recruiting African-American barbershops for prostate cancer education. *Journal of the National Medical Association*. 2008; 100:1012–1020. [PubMed: 18807428]
- Henny KD, Crepaz N, Lyles CM, Marshall KJ, Aupont LW, Jacobs ED, et al. Efficacy of HIV/STI behavioral interventions for heterosexual African American men in the United States: A meta-analysis. *AIDS and Behavior*. 2012; 16:1092–1114. [PubMed: 22234436]
- Herbst JH, Kay LS, Passin WF, Lyles CM, Crepaz N, Marin BV. A systematic review and meta-analysis of behavioral interventions to reduce HIV risk behaviors of Hispanics in the United States and Puerto Rico. *AIDS and Behavior*. 2007; 11:25–47. [PubMed: 16917668]
- Herek GM. Thinking about AIDS and stigma: A psychologist’s perspective. *Journal of Law, Medicine & Ethics*. 2002; 30:594–607.
- Herek GM, Capitano JP, Widaman KF. HIV-related stigma and knowledge in the United States: Prevalence and trends, 1991–1999. *American Journal of Public Health*. 2002; 92:371–377. [PubMed: 11867313]
- Israel BA, Checkoway B, Schulz A, Zimmerman M. Health education and community empowerment: conceptualizing and measuring perceptions of individual, organizational, and community control. *Health Education Quarterly*. 1994; 21:149–170. [PubMed: 8021145]
- Israel BA, Schulz AJ, Parker EA, Becker AB. Review of community-based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health*. 1998; 19:173–202.

- Jaccard J, Wan CK. A paradigm for studying the accuracy of self-reports of risk behavior relevant to AIDS: Empirical perspectives on stability, recall bias, and transitory influences. *Journal of Applied Social Psychology*. 1995; 25:1831–1858.
- Johnson BT, Scott-Sheldon LA, Carey MP. Meta-synthesis of health behavior change meta-analyses. *American Journal of Public Health*. 2010; 100:2193–2198. [PubMed: 20167901]
- Johnson WD, Diaz RM, Flanders WD, Goodman M, Hill AN, Holtgrave D, et al. Behavioral interventions to reduce risk for sexual transmission of HIV among men who have sex with men. *Cochrane Database of Systematic Reviews*. 2008; 2008(3)10.1002/14651858.CD001230.pub2
- Kalichman SC, Cherry C, Browne-Sperling F. Effectiveness of a video-based motivational skills-building HIV risk-reduction intervention for inner-city African American men. *Journal of Consulting and Clinical Psychology*. 1999; 67:959–966. [PubMed: 10596517]
- Kamb ML, Fishbein M, Douglas JM Jr, Rhodes F, Rogers J, Bolan G, et al. Efficacy of risk-reduction counseling to prevent human immunodeficiency virus and sexually transmitted diseases: A randomized controlled trial. Project RESPECT Study Group. *Journal of the American Medical Association*. 1998; 280:1161–1167. [PubMed: 9777816]
- Lansky A, Thomas JC, Earp JA. Partner-specific sexual behaviors among persons with both main and other partners. *Family Planning Perspectives*. 1998; 30:93–96. [PubMed: 9561875]
- Linnan LA, Reiter PL, Duffy C, Hales D, Ward DS, Viera AJ. Assessing and promoting physical activity in African American barbershops: Results of the FITStop pilot study. *American Journal of Men's Health*. 2011; 5:38–46.
- Luque JS, Rivers BM, Kambon M, Brookins R, Green BL, Meade CD. Barbers against prostate cancer: A feasibility study for training barbers to deliver prostate cancer education in an urban African American community. *Journal of Cancer Education*. 2010; 25:96–100. [PubMed: 20146044]
- Mahajan AP, Sayles JN, Patel VA, Remien RH, Sawires SR, Ortiz DJ, et al. Stigma in the HIV/AIDS epidemic: A review of the literature and recommendations for the way forward. *AIDS*. 2008; 22:S67–S79. [PubMed: 18641472]
- New York City Department of Health. New York City HIV/AIDS Annual Surveillance Reports, 2009. 2010. Retrieved from [www.nycgov.html/doh/ah/HIVtables.shtml](http://www.nycgov.html/doh/ah/HIVtables.shtml)
- Noar SM. Behavioral interventions to reduce HIV-related sexual risk behavior: Review and synthesis of meta-analytic evidence. *AIDS and Behavior*. 2008; 12:335–353. [PubMed: 17896176]
- Noar SM, Palmgreen P, Chabot M, Dobransky N, Zimmerman RS. A 10-year systematic review of HIV/AIDS mass communication campaigns: Have we made progress? *Journal of Health Communication*. 2009; 14:15–42. [PubMed: 19180369]
- O'Donnell CR, O'Donnell L, San Doval A, Duran R, Labes K. Reductions in STD infections subsequent to an STD clinic visit. Using video-based patient education to supplement provider interactions. *Sexually Transmitted Diseases*. 1998; 25:161–168. [PubMed: 9524995]
- Parrish DD, Kent CK. Access to care issues for African American communities: Implications for STD disparities. *Sexually Transmitted Diseases*. 2008; 35:S19–S22. [PubMed: 18946368]
- Patterson, K.; Grenny, J.; McMillan, R.; Switzler, A. *Crucial conversations: Tools for talking when stakes are high*. New York: McGraw-Hill; 2002.
- Poundstone KE, Strathdee SA, Celentano DD. The social epidemiology of human immunodeficiency virus/acquired immunodeficiency syndrome. *Epidemiologic Reviews*. 2004; 26:22–35. [PubMed: 15234945]
- Releford BJ, Frencher SK Jr, Yancey AK. Health promotion in barbershops: Balancing outreach and research in African American communities. *Ethnicity & Disease*. 2010; 20:185–188. [PubMed: 20503901]
- Releford BJ, Frencher SK Jr, Yancey AK, Norris K. Cardiovascular disease control through barbershops: Design of a nationwide outreach program. *Journal of the National Medical Association*. 2010; 102:336–345. [PubMed: 20437741]
- Scott-Sheldon LA, Huedo-Medina TB, Warren MR, Johnson BT, Carey MP. Efficacy of behavioral interventions to increase condom use and reduce sexually transmitted infections: A meta-analysis, 1991 to 2010. *Journal of Acquired Immune Deficiency Syndromes*. 2011; 58:489–498. [PubMed: 22083038]

- Sengupta S, Banks B, Jonas D, Miles MS, Smith GC. HIV interventions to reduce HIV/AIDS stigma: A systematic review. *AIDS and Behavior*. 2011; 15:1075–1087. [PubMed: 21088989]
- Taylor T, Joseph MA, Henny KD, Pinto AR, Agbetor F, Camilien B, et al. Perceptions of HIV risk and explanations of sexual risk behavior offered by heterosexual black male barbershop patrons in Brooklyn, NY. *Journal of Health Disparities Research and Practice*. (in press).
- U.S. Census Bureau. The Black alone or in combination population in the United States, 2011. 2013. Retrieved from <http://www.census.gov/population/race/data/ppl-bc11.html>
- Vergidis PI, Falagas ME. Meta-analyses on behavioral interventions to reduce the risk of transmission of HIV. *Infectious Disease Clinics of North America*. 2009; 23:309–314. [PubMed: 19393911]
- Victor RG, Ravenell JE, Freeman A, Leonard D, Bhat DG, Shafiq M, et al. Effectiveness of a barber-based intervention for improving hypertension control in black men: The BARBER-1 Study: A cluster randomized trial. *Archives of Internal Medicine*. 2011; 171:342–350. [PubMed: 20975012]
- Wilson TE, Hogben M, Malka ES, Liddon N, McCormack WM, Rubin SR, Augenbraun MA. A randomized controlled trial for reducing risks for sexually transmitted infections through enhanced patient-based partner notification. *American Journal of Public Health*. 2009; 99:S104–S110. [PubMed: 18556619]

TABLE 1

## Intervention Objectives, Key Messages, and Activities in the Barbershop Talk With Brothers (BTWB) Program

Module Title	Learning Objectives	Key Messages	Module Contents
Wake Up!	Explain the purpose of the BTWB intervention	BTWB is an intervention strategy to reduce high-risk sexual behaviors among Black heterosexual men	Icebreaker
	Describe participant roles and responsibilities	HIV/AIDS is like a fire raging out of control in Black communities	Establishment of ground rules
	Explain the theme of the module	Black men are best suited to address problems in the Black community	Fire of HIV in the Black community
	Expand definition of what being a “healthy” man means	A healthy man utilizes his own strengths to improve the health of not only his own, but that of others in his family and community	Identification of individual skills and strengths
	Explore how different concepts of masculinity impact men’s health behaviors	Black men can improve the health of their communities by sharing health-related information through their social networks	Each one teach one
	Identify individual strengths and assess how these can be used in HIV prevention in the community		
	Increase favorable attitudes toward utilizing social networks to convey healthy messages about HIV/AIDS		
Gear Up!	Explain the theme of the module	HIV doesn’t discriminate but is preventable	Stigma icebreaker
	Appreciate importance of decreasing HIV-related stigma in Black community	Stigma and other factors that fuel the fire of HIV	What is HIV?
	Distinguish between HIV and AIDS	Nationally, Black men have disproportionately higher rates of HIV/AIDS than other racial groups	Health disparities in Black communities
	Reduce perception that behaviors of Black men and women account for all disparities in HIV	Local levels of HIV/AIDS in various Brooklyn neighborhoods impact Blacks at greater rates	Proper condom use to prevent HIV
	Understand the impact of HIV in Black communities locally and nationally	Higher levels of poverty, stigma, racism, and discrimination contribute to increased rates of HIV/AIDS among Blacks	HIV myths and facts
	Increase behavioral skills for condom use and promote positive attitudes toward consistent condom use	Black men can fight the fire of HIV through consistent/proper condom use and regular HIV testing	
	Explain importance of HIV testing and provide resources for free and confidential testing		
Build Up!	Explain the theme of the module	Black men can build a legacy of health against the fire of HIV	How to have a conversation about HIV prevention
	Identify behaviors and situations that might personally lead to unprotected sexual intercourse	Effective communication with sexual partners and within social networks regarding HIV risk, protection, and testing is critical	HIV risk, protection, and testing role play scenarios
	Develop skills for negotiating condom use	Community empowerment: Black men can play key leadership roles in HIV prevention through collective community effort	Personal goals for fighting fire of HIV
	Develop personal goals in becoming a community advocate for HIV prevention		



**TABLE 2**

Baseline and 3-Month Assessments of Sexual Risk Behavior, Condom Use Attitudes and Self-Efficacy, HIV Stigma, and Community Empowerment in the BTWB Intervention Pilot Test

	<b>Baseline</b>	<b>Follow-up</b>	<b><i>p</i>-value</b>
	<b>(<i>N</i> = 80)</b>	<b>(<i>N</i> = 71)</b>	
Unprotected anal or vaginal sex, past 3 months	75.0%	58.6%	0.007
Unprotected anal or vaginal sex with two or more women, past 3 months	46.2%	16.7%	0.0001
Positive attitude toward consistent condom use, next 3 months	58.8%	81.7%	0.006
Self-efficacy for consistent condom use, next 3 months	72.5%	87.3%	0.06
Community empowerment	Mean = 18.7; <i>SD</i> = 4.0	Mean = 19.6; <i>SD</i> = 3.4	0.06
HIV stigma	Mean = 24.7; <i>SD</i> = 8.4	Mean = 22.8; <i>SD</i> = 8.8	0.11

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript