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A Quantitative Study on the Condom-Use Behaviors of Eighteen- to Twenty-Four-Year-Old Urban African American Males

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Abstract

This research study sought to develop, pilot test, and assess a brief male-centered condom promotion program for urban young adult African American males. For study implementation, both qualitative and quantitative research methods were used, and the project was guided by tenets of two common but integrated theoretical frameworks in HIV/sexually transmitted disease (STD) prevention research: the social cognitive theory and the stages of change model. The purpose of the qualitative component was to identify and explore condom-use barriers and facilitators while that of the quantitative component was to identify the prevalence of condom-related behaviors and the feasibility of program administration. After recruitment of study participants from hang-out spots and street intercepts, study participants were self-administered a baseline survey regarding their perceived condom-use behaviors prior to random assignment to program conditions (a condom promotion program and an attention-matched comparison condition). In this paper, we report the findings from the analyses of the quantitative baseline survey data. While the occurrence of HIV/STD-related risk behaviors were highly prevalent among this population; importantly, regression analyses revealed that sexual debut, favorable attitudes toward condom use, social or personal connectedness to HIV/STDs, health beliefs, perceived susceptibility, unprotected sexual encounters, and refusal skills were predictive of retrospective (i.e., prior 30 days) condom use while positive reasons (pros) to use condoms, condom-use beliefs, condom-carrying, health belief, unprotected sexual encounters and refusal skills were also predictive of prospective (i.e., future 30 days) condom-use intentions. The implications and limitations of this study are described and recommendations provided for program development.

INTRODUCTION

Sexually transmitted diseases (STDs), including HIV, are at epidemic proportions in the United States, especially among urban racial/ethnic minority youth, who generally tend to be unprepared to deal with the consequences of sexual activities.[1,2] Widespread health screening studies among urban minority youth, especially African Americans, at community-based clinics and family planning centers have shown high prevalence of STDs.[3,4] Furthermore, although newly diagnosed AIDS cases have decreased overall in the United States because of the current standard of HIV/AIDS care (i.e., improvement in HIV/STD-related prevention, treatment and care programs); yet this decrease has not been relatively uniform among all U.S. racial/ethic populations, age groups, and vulnerable populations.[5,6] For example, while African Americans represent a small proportion (13%) of the U.S. population, nevertheless,

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they accounted for a large proportion of the estimated cumulative AIDS cases (40%) and AIDS deaths (37%) through 2003.[5] Also, while new HIV diagnoses from 1994 through 2003 had declined more sharply among whites (31%) than African Americans (24%),[5,7] a comparable decline in the number of newly diagnosed HIV cases among youth, especially minority youth, has not been observed.[5-7] Moreover, despite the effects of risky sexual behaviors on the quality of life of urban youth (e.g., HIV/STDs, substance abuse), the ability for young adults across all racial/ethic groups, including African American males, to consistently and correctly use condoms as an effective HIV/STD prevention strategy has become a formidable challenge for intervention research.[8,9]

The bad news is that it is clear that negative attitudes about condom use persist. For example, sexually experienced young men report that condoms reduce physical pleasure, are embarrassed to purchase condoms, and perceive condom use as an indication of infidelity[10] and HIV/STD-seropositive status.[11] Other barriers include multiple condom insertion errors,[10] cost,[12] condom unavailability,[13] abusive relationship,[14] domestic violence,[15] and adherence to traditional gender role.[15] In addition, a cross-sectional study on perceived condom-use knowledge and practice, including condomuse errors, among 141 incarcerated adolescent males aged 12-17 years by Bortot and colleagues[16] documented that 37% of participants reportedly failed to secure condoms to the penis on withdrawal, 18% had lost erection before condom removal, and that 14% had failed to leave any space at the tip of the condoms. Moreover, less is known about condom-specific interventions, especially for urban African American males[8] frequenting popular hangout spots and street corners, who are disproportionately impacted by HIV/STDs.[5-7,17,18] Furthermore, literature reports regarding the prevalence of condom use have been inconsistent—that is, some studies have reported an increasing trend[13,19,20] while others have reported a lack of a trend toward greater condom use,[21,22] despite the fact that noncondom users are twice as likely to acquire STDs.[22]

The good news is that several behavioral-driven HIV/STD prevention programs have proven effective in preventing HIV/STDs by reducing unprotected sexual intercourse and promoting and supporting condom use, including young adult males committing fewer condom-related errors.[5,6,16,23] Most importantly, several factors have been reported to positively influence condom use among sexually experienced youth, such as condom availability,[20] positive beliefs or attitudes (e.g., do not reduce sexual pleasure) about condoms,[21] perceive peer norms as endorsing condom use,[12] parent-youth discussions about condoms,[24] confidence about condom-use knowledge[16] and condom-use skills,[15,23] knowledge of HIV serostatus,[25] perceive condoms as protective and effective,[21] discussions about condom use with sexual partners,[21] not using alcohol and/or drugs during sexual encounters,[26] and the relationship status of sexual partners (e.g., use is more likely in short-term and causal relationships than long-term and steady relationships).[10,27]

Factors associated with consistent condom use, especially among African Americans, have been reported to include male gender, youth, engaging in lower frequency of sexual intercourse, greater impulse control, having fewer feelings of loneliness, greater self-efficacy to refuse high-risk sexual activities, perceptions that peer norms support condom use, not having had prior difficulty with using condoms and greater self-efficacy to persuade sexual partners about the importance of condom use.[8] Because gaps exist between young adults' intentions to have safer sexual intercourse and their actual use of condoms, other determinants that have been reported to promote condom use among youth include programming that supports cognitive planning for discussingand managing condom use, and motives for having sex to enhance mood, to express love, to experience pleasure, and to please others.[28] Specifically, Bortot and colleagues[16] reported that 27% of participants had learned to use condoms at home, 23% at school, 14% at probation and detention facilities, and 3% at community programs. Regarding their perceived preferred methods for learning to use condoms, 45% of those participants stated

that they had reportedly read the package insert, 39% participated in condom demonstration programs, 33% got explanation in words, and 19% from media-related sources.[16] As such, there is a critical need to reach high risk seeking populations such as young adult urban African American males at community-related venues and/or hangout spots where they frequent with behavioral-driven condomrelated learning skills.

In an effort to develop, support and promote a brief male-focused condom promotion program, irrespective of sexual orientation, we conducted a health promotion study to further explore the condom seeking behaviors of young adult urban African American males who frequent hang out spots such as street corners, neighborhood grocery stores, indoor game centers, or fast food store parking lots. In this paper, we report the baseline findings from this research study that was designed to identify the determinants of condom-use barriers and facilitators, as well as the perceived stages of change for condom use and the condom-related behavioral skills of this population.

This research study was guided by two commonly used, but integrated, theoretical foundations in HIV/STD prevention research: Bandura's social cognitive theory (SCT)[29] and Prochaska and colleagues' transtheoretical model (TTM),[30] also referred to as the stages of change model (SCM). Two behavioral determinants of the SCT are outcome expectancies and self-efficacy.[29] Outcome expectancies, for example, relate to the extent to which a person values the expected outcome of a specific behavior (e.g., condom use) based on a perceived reward or cost (e.g., prevention of HIV/STD infections). Self-efficacy, on the other hand, is the belief that a person is capable of performing a particular behavior (e.g., correct, consistent and effective condom use), even if it involves numerous challenges (e.g., condom insertion skills) that can be developed or enhanced through modeling (e.g., role plays). In addition, the SCM particularly aims to change an individual's sexual behavior.[30] When applied to condom-use behaviors, it consists of six stages: (1) precontemplation—e.g., no consideration for condom use; (2) contemplation— e.g., recognize the need for condom use; (3) preparation—e.g., think about condom use; (4) action—e.g., consistent condom use for shorter duration (<6 months); (5) maintenance—e.g., consistent condom use for longer duration (>6 months); and (6) relapse —e.g., experience barriers to condom use such as slippage. As an integrated framework, when effectively applied to sexual behaviors, the SCT and SCM hypothesize that behaviors such as preventing HIV/STD can be affected by an understanding of what must be done to avoid HIV/STD (e.g., correct and consistent condom use), a belief in the anticipated benefit of avoiding unprotected sexual encounters (e.g., HIV/STD infection-free), and a belief that such skills can be effectively used in situations regarding risky sexual contexts.[23]

STUDY METHODS

Eligibility criteria

Individuals were eligible for participation in the study if they were African merican males between the ages of 18-24 years old with access to health services at one of four designated community centers on Chicago's South Side; and vulnerable to HIV/STDs such as prior evidence of infections, self-report of unprotected sexual intercourse or inconsistent condom use, or multiple noncommitted sexual partners in the past 3-6 months. The study materials such as the survey questionnaire and consent forms were developed at the sixth-grade reading level.

Enrollment procedures

Participants were individually approached at hang-out spots such as grocery stores, street corners, and indoor recreational centers within the neighborhoods of one of four designated community centers by study team members (or recruiters) during community outreach recruitment visits, as well as via a mobile van making stops at targeted recruitment sites. The

mobile van had a television set showing hip-hop musical videos, a sound system playing the latest rap music, and a loudspeaker system with a conductor rhyming about the initiation and implementation of various community-focused HIV/STD prevention initiatives, including the provision of free condoms. Whether by community outreach recruitment visits or the mobile van, at each recruitment site, study team members had individually approached each person and subsequently informed them about the goals of the project. Then, individuals with interest were sequestered into a private space to determine their eligibility for enrollment into the study. A standardized form was utilized to collect and verify basic screening information regarding each participant's age and community of residence, and evidence of HIV/STDs or high risk sexual behaviors. Participants meeting the eligibility criteria were asked to provide relevant locators and tracking information such as cell phone and pager numbers, contact information on three family members or personal friends and information on other commonly used hang out spots in order to finalize their enrollment procedures for the longitudinal pilot study. For those who were asked to provide additional information to confirm their eligibility, a mutually acceptable prearranged meeting was scheduled within the next 24-48 hours to meet and complete the enrollment requirements. At those prearranged sessions, eligibility criteria were reconfirmed and the informed consent procedures administered to participants, in which each person was asked to repeat the highlights of the informed consents based on a standardized checklist of major study events such as perceived benefits (if any), expectations of program staff for participation in the study, and incentives or enablers. Last, signed copies of the informed consent forms were separately provided to participants who were then informed of the dates and times for baseline survey administration, random assignment to program conditions and program administration, respectively. Then, each participant was given $15 for the completion of the 30-minute baseline survey and the administration of a 45-60 minute brief condom promotion program, $10 as reimbursement for transportation cost, and then provided a diverse collection of condoms in order to select up to three condoms.

Study participants

A total sample of 364 urban African American males within the project area was approached by trained program staff for recruitment into the study. Approximately equal number of individuals from each of four designated community centers, including the respective surrounding communities was targeted for recruitment. Of the 364 males we had approached, 37% (136) completed the self-administered baseline survey and were further randomized to one of two program conditions (a condom promotion program or a corresponding attention-matched comparison program) for program implementation. As such, the findings from this baseline survey are reported in this paper. Furthermore, the remaining 63% (228) of those participants we had approached did not participate in the baseline survey or the research study for a variety of reasons that included ineligibility for enrollment, refusal to participate, lack of interest in research study and unavailability based on time and commitment as described by program staff, among others. Accordingly, no further study-related information on demographic and/or risk behavioral characteristics was obtained from those participants. Last, because our collaborating partner engages in several public health-related prevention initiatives within the targeted communities, our partner's community visibility strongly supported our recruitment efforts, including the local buy-in of this research study by participating community stakeholders.

Study measures

We used short durations to elicit appropriate recalls of condom-seeking behaviors for study participants because prior research has established that such contexts may be appropriate for accurate recall of risky behaviors and to permit detection of relatively infrequent sexual-related behaviors.[4,8,23,30,31] Also, various samples of valid psychometric constructs[4,8,22,31,32] were retrieved, compiled, pretested for clarity and appropriateness, and then refined, as

required, during survey development. Accordingly, we developed a 33-item 30-minute self-administered pencil-and-paper questionnaire to elicit relevant data on condom seeking behaviors of urban young adult African American males. This integrated construct was consistent with tenets of both theoretical models. Last, a few of the constructs we had used for this study are described below.

Demographic characteristics—The survey items assessed characteristics such as a participant's age (e.g., How old are you?), educational level (e.g., How far in school have you reached?) or lifetime substance use (e.g., Have you ever used alcohol?) for which relevant responses were provided.

HIV/STD-related prevention knowledge—The survey items assessed a participant's knowledge regarding HIV/STD prevention, myths and misconceptions, risky sexual behaviors, and effective prevention practices.

Perceived HIV/STD-related vulnerability—A single item 5-point Likert scale that assessed a participant's perceived susceptibility for contracting HIV/STDs (e.g., What do you think are your chances of getting HIV or STDs?), for which higher scores (0 = very likely to 4 = very unlikely) represented a lower level of perceived susceptibility.

Condom-use intention—The survey items assessed a participant's self-report regarding consistent, accurate and effective condom use within a defined period. Sample measures included the past 30 days condom use (1 = yes or 0 = no) and next 30 days condom-use intentions (1 = yes or 0 = no).

Condom-use attitudes—The survey items assessed a participant's perceived attitudes toward condom use based on a 5-point Likert scale (e.g., 0 = strongly disagree to 4 = strongly agree). Higher scores represented more favorable attitudes toward condom use.

Condom-use barriers—The survey items assessed a participant's' perceived barriers (e.g., sexual sensation related to condom use) to use condoms correctly, consistently and effectively based on a 5-point likert scale (e.g., 0 = strongly disagree to 4 = strongly agree). Higher scores represented greater barriers to condom use.

Peer-related factors—These survey items assessed peer norms regarding condom use (e.g., Of your friends and peers who have sex, how many of them would you say use condoms most of the time?), peer communication regarding condom use (e.g., Do you talk about condom use with your friends or peers?), and HIV/STD prevention (e.g., Do you talk about ways to protect yourself from getting HIV or STDs with your friends or peers?), peer support for condom use (e.g., I received support and encouragement from my friends and peers), among others. Responses were represented by (1) yes or no; (2) none of them, some of them, almost all of them; or (3) 5-point Likert scales (e.g., 0 = strongly disagree to 4 = strongly agree).

Partner-related factors—These survey items assessed a participant's perceptions of their sexual partner based on HIV/STD-related risk and protective behaviors, condom use, sexual communication or negotiation skills, among others. Responses were represented by 5-point Likert scales (e.g., 0 = strongly disagree to 4 = strongly agree).

Decisional balance—A 5-item scale that assessed the pros (potential advantages/benefits) and another 5-item scale that assessed the cons (potential disadvantages/costs) of using condoms during sexual intercourse (e.g., vaginal, anal and/or oral) in order to create a decisional

balance regarding the potential gains and/or losses associated with condom use.[33] Responses were represented by 5-point Likert scales (e.g., 0 = not important, to 4 = extremely important).

Condom-use self-efficacy—A 4-item scale that rates a participant's level of confidence in correctly, consistently and effectively using condoms (e.g., I feel confident that I could use a condom correctly). Responses were represented by a 5-point Likert scale (e.g., 0 = strongly disagree to 4 = strongly agree) where higher scores denoted greater self-efficacy.

Data collection procedures

Two experienced African American HIV/STD prevention specialists (one male, one female) from our local collaborating organization were trained in data collection proceduresas the primary data collectors. The surveys were coded with unique identifiers and administered to enrolled participants based on appropriate schedules in a secured office space at one of four designated community centers. The survey was administered on an individualized, i.e., one-on-one basis. The data collection occurred immediately after a participant had been enrolled into the study and the informed consent procedures completed but prior to program administration, with the data collector stressing the need for honestly in answering survey questions. Finally, the study protocols, implementation procedures, and all relevant approvals and clearances from the collaborating organization, including the community centers were approved by the Institutional Review Board (IRB) of the Pacific Institute for Research and Evaluation (PIRE) regarding the ethical protection of human subjects prior to the commencement of this research study.

Data analyses

First, survey data were entered into a customized data management system by an experienced data entry staff. Second, a more experienced data entry staff rechecked all data entries for verification purposes. Where error existed, the particular survey item was reviewed and the appropriate correction made in the data management system by the second-level data verification staff. Prior to data analyses, all variables were checked for normality of distribution, including out-of-range and non-logical responses. Third, a series of χ^2 tests (2×2) of significance were computed to assess the association and/or relationships between various dependent and independent variables. All analyses were performed using the Statistical Package for the Social Sciences (SPSS; SPSS Inc., Chicago, IL) version 13.

The analyses were conducted on the study's baseline data to examine the scales' internal consistencies and/or reliabilities based on Cronbach α. A majority of the scales had acceptable α; however, a few (e.g., substance use, health belief, condom-use support, and social relations or personal connectedness to HIV/STDs) had low α values. The low internal consistencies were likely due to the influence of the scales with four or fewer items per construct, where the magnitude of the coefficient α was observed to be inversely related to the number of items.[34] Table 1 shows the various coefficient α values, including the respective number of assessment items per survey scale.

Multiple logistic regression analyses were performed to examine the extent to which the 17 constructs, as shown in Table 2 (e.g., posi-tive reasons to use condoms, negative reasons to use condoms, condom-use beliefs, condom-carrying, and condom-use efficacy, etc.), predict prior (retrospective) and future (prospective) 30-day condom-use behaviors. Since all predictors are continuous, they were transformed to *z* scores prior to performing the logistic regressions in order to render the odds ratios (OR) to be more comparable across predictors. Accordingly, multicollinearity was not a problem in the logistic regressions, as correlations between predictors did not exceed 0.53 and the average correlation[34] between the predictor variables was 0.14. The predictors explained a significant proportion of variability in prior 30-

day condom use, $\chi^2(17) = 56.57$, $p < 0.001$, $r^2_{CS} = 0.39$, as well as the next 30-day condom-use intentions, $\chi^2(17) = 64.67$, $p < 0.001$, $r^2_{CS} = 0.39$, respectively.

RESULTS

General characteristics

Overall, 136 young adults between the ages of 18-24 years old completed the baseline survey (see Table 2). The enrolled participants were inner-city African American males residing in demographically disadvantaged neighborhoods and communities bordering the four designated community health centers on Chicago's South Side. Descriptive analyses revealed that 50% (68) of enrolled participants were 18 years old and 9% (12) were 24 years old, with the majority (77%) being 20 years of age or younger. At the time of survey administration, 52% (71) of enrolled participants were reportedly in high school, 19% (25) dropped out of high school while 23% (31) completed high school or the General Education Development (GED) examination, and 7% (9) were in postsecondary programs such as vocational or trade school, junior college and/or 4-year degree graduating universities, respectively.

Sexual debut

Study participants reported experiencing sexual events at relatively young ages. Analyses of the data revealed that 10% (14) of enrolled African American males had sexual intercourse for the first time at the age of 9 years old or younger, 10% (13) at ages 10 and 11 years old, and 12% (16) at 12 years old. Also, 21% (28) of the sample encountered sexual intercourse for the first time at 13 years old, 24% (32) at 14 years old, 11% (15) at 15 years old, and 8% (11) at 16 years old, respectively. By 17 years of age, nearly all study participants (99%) had reportedly engaged in, experienced, and/or had encountered sexual intercourse for the first time. Overall, a third (32%) of enrolled African American males had reportedly experienced (or encountered) their first sexual event by the age of 12 years or younger, and more than four fifths (87%) had had sexual intercourse by the time they were 15 years old.

Risky sexual behaviors

Alarmingly, self-reports regarding high-risk sexual behaviors were noticeably observed among this population. First, 84% (114) of study sample had reportedly engaged in sexual activities during the past 30 days; of which, 45% (51) did not use condoms. On the other hand, of those who had reportedly used condoms during the past 30 days, over a third (36%) of them had inconsistently used condoms. Second, of the 90% (123) of the study sample who had reportedly planned to have sexual intercourse in the next 30 days, approximately one third (33%) do not plan to consistently use condoms. Third, 76% (103) of the study sample reportedly had unprotected sexual intercourse (i.e., sexual activities without condoms) during the past 3 months; of which, 27% (28) reported only one occasion of unprotected sexual activity, 48% (49) reported a few times of unprotected sexual activities while 25% (26) reported a lot of times of unprotected sexual activities without condom use during that period. Also, 25% (34) of study sample intend (or plan) to have sex without condoms approximately half of the time, most of the time, or all of the time during the next 3 months. Fourth, of the 96% (130) of the study sample who had reportedly planned to have sexual intercourse in the next 6 months, approximately one third (32%) of them also do not intend to consistently use condoms.

Substance use

Self-reported history of life time substance use was very prevalent among this sample of urban African American males. For example, the frequency of life time substance use revealed that 90% (121) of the study sample had reportedly consumed alcohol, 90% (122) used marijuana (or weed), and 11% (14) used ecstasy. In addition, a relatively very small proportion of the

sample (2%) had reportedly used other drugs such as cocaine, crack, heroin, speed, preemo, and/or inhalants. A series of 2 × 2 χ^2 analyses (data not shown) revealed that of those who had reportedly used alcohol, 52% ($\chi^2 = 0.011$, $p \leq 0.918$) had used condoms in the past 30 days while 64% ($\chi^2 = 1.173$, $p \leq 0.279$) intent on using condoms in the next 30 days; and of those who had used marijuana, 51% ($\chi^2 = 0.182$, $p \leq 0.669$) had reportedly used condoms in the past 30 days while 63% ($\chi^2 = 0.001$, $p \leq 0.985$) intent on using condoms in the next 30 days.

Health-related behaviors

HIV/AIDS, including other STDs, poses a serious public health problem for African Americans. The survey data revealed that 27% (36) of study participants personally knew someone with HIV/AIDS, 26% (35) knew someone who had died of AIDS and, strikingly, over half (56%) also knew someone who has had STDs. Regarding HIV/STD testing, 65% (88) of the study sample have been tested for HIV and 60% (81) for other STDs such as chlamydia, gonorrhea, and/or syphilis. Also, a very small proportion of study participants (2%) knowingly had sexual encounters with HIV-positive individuals while 82% (110) of the study sample claimed that they have not done so, and 16% (22) stated that they really do not know whether they have done so or not. Furthermore, 30% (41) of the study sample had reportedly been treated by a doctor for STDs, 93% (126) would get tested if they thought that they were at risk for STDs and 86% (116) did not think that it was embarrassing to get tested for HIV, while 93% (126) would also get tested if they thought that they were at risk for HIV infections. Lastly, over two thirds (71%) of study participants agreed or strongly agreed that condoms protect against HIV/STDs while 18% (24) had doubts about the role of condoms as a protective device against HIV/STDs (i.e., disagreed or strongly disagreed) and 12% (16) indicated that they were unsure (or uncertain). Regarding the data on HIV/STD-related testing and treatment, a series of 2 × 2 chi-square analyses were performed and the results also revealed that of those participants who had tested for HIV, 36% ($\chi^2 = 1.258$, $p \leq 0.262$) had reportedly used condoms in the past 30 days while 49% ($\chi^2 = 0.278$, $p \leq 0.598$) intend on using condoms in the next 30 days. Also, of those who had tested for other STDs (e.g., chlamydia, gonorrhea, herpes, or syphilis), 32% ($\chi^2 = 2.905$, $p \leq 0.088$) had reportedly used condoms in the past 30 days while 42% ($\chi^2 = 1.889$, $p \leq 0.169$) intent on using condoms in the next 30 days; and, most importantly, of those who have been treated for STDs, 13% ($\chi^2 \leq 4.061$, $p \leq 0.044$) had reportedly used condoms in the past 30 days and 18% ($\chi^2 = 4.769$, $p \leq 0.029$) intent on using condoms in the next 30 days while only 8% ($\chi^2 = 0.780$, $p \leq 0.377$) think that they will contract HIV/AIDS, respectively.

Condom-carrying behaviors

African American males perceived an inverse relationship between condom-carrying behaviors and sexual encounters. Analyses of these baseline quantitative data revealed that nearly half of the study participants (49%) did not have a condom with them during survey administration. Of the 51% (70) of the study sample who were carrying condoms during survey administration, 30% (21) had one condom, 36% (25) had two or three condoms, and the remaining participants (34%) had four or more condoms, respectively. Also, nearly all study participants (93%) knew where and how to get condoms (if they needed them), 90% (121) felt that they could comfortably ask for condoms in a grocery store while 95% (128) indicated that they could comfortably get them from a clinic. Most importantly, 74% (100) of study sample reportedly disagreed or strongly disagreed with the context that people who carry condoms are just looking for sex and 64% (87) disagreed or strongly disagreed that people who carry condoms would have sex with anyone; and despite such assertions regarding condom-carrying behaviors, 47% (64) of study participants reported that they generally do not have condoms on them, most of the time, when they actually need them for sexual encounters.

Peer communication

Peer communication is a relatively useful mechanism (or medium) to disseminate HIV/STD-related prevention messages to inner-city African American males. For example, 60% (82) of study participants reportedly received support and encouragement from their peers, 44% (60) share similar views about condoms as their peers, and 49% (66) would most likely talk to their peers if they had questions and/or concerns about condoms; yet, only 36% (49) felt that the opinions of their peers about what they generally do was considered important to them. Additionally, 70% (95) of study participants reportedly communicate with their friends about condom use and 52% (69) about ways to protect or prevent themselves from contracting HIV/STDs. Interestingly, of their peers who engage in sexual activities, only 27% (36) think that almost all of them use condoms most of the time while 70% (95) assumed that some of them use condoms most of the time. Also, it is quite alarming to note that approximately two thirds (64%) of study participants reportedly agreed or strongly agreed to the assertion that their friends or peers think that it is appropriate for people their age to have sex with several different people in the same month. In addition, for peer communication regarding condom use, a series of 2×2 χ^2 analyses revealed that of those participants who had talked to their peers or friends about condoms, 43% ($\chi^2 = 1.384$, $p \leq 0.239$) had reportedly used condoms in the past 30 days while 50% ($\chi^2 = 0.599$, $p \leq 0.439$) intent on using condoms in the next 30 days.

Partner relationship

On average, African American males had reported having a relatively safe HIV/STD-related relationship dynamics with their perceived sexual partners. For example, more than half (52%) of study sample reportedly disagreed or strongly disagreed with the assertion that one does not need a condom if you are with the same partner for a long time (i.e., stable relationship) while 26% agreed or strongly agreed and 22% were unsure about the role of condom in stable relationships. Also, 50% (68) of study participants reportedly agreed or strongly agreed with the assertions that their partners think it is important to talk about AIDS, condoms and/or safer sexual practices while 28% (38) disagreed or strongly disagreed and 21% (29) were unsure about the perceptions of their partners regarding discussions on AIDS, condoms and/or safer sexual practices, respectively. Furthermore, 51% (69) of the study sample felt that they could refuse to have sex if their partner did not allow the use of condoms, 79% (108) did not think that their part-ners would get mad if they insisted on condom use, and 85% (115) could convince their partners to use condoms; yet by insisting on condom use, 39% (53) of study participants had some concerns because they assumed that their partner would think that they were sexually involved with another person. Over half (53%) of study participants also assumed that their partners would prefer that they use condoms during sexual activities relative to 27% (36) who disagreed or strongly disagreed, while 21% (28) were unsure whether their partner would support condom use. Lastly, 47% (64) of the study sample agreed or strongly agreed that using condoms would help to build trust in their relationships, while 24% (33) disagreed or strongly disagreed and 28% (38) of them were uncertain of its impact on their relationship.

Perceived HIV/STD-related susceptibility

African American males remain concerned about HIV/STDs. The data revealed that nearly similar proportions of enrolled participants were reportedly somewhat worried or very worried about contracting HIV (47%) and STDs (45%) while similar proportions were observed for those who were not worried at all (29% versus 27%) versus those who were a little worried (13% versus 21%) and unsure (10% versus 7%). When asked about their chances of getting HIV/STDs, a relatively greater proportion of study participants reportedly felt that they had an increased likelihood such as very likely or somewhat likely of contracting STDs (20%) than HIV (15%) while a similar proportion of study participants were unsure (35% versus 34%) about their chances of contracting HIV/STDs, respectively.

Predictors of condom use

As shown in Table 3, analyses of the data pointed to indicators that could potentially promote condom use among young adult urban African American males, and such findings have implications regarding the development of condom promotion programs for this hard-to-reach population with HIV/STD prevention. Specifically, favorable attitudes regarding condom use ($\chi^2 = 6.43$, odds ratio [OR] = 2.73, 95% confidence interval [CI] = ±3.20, $p \leq 0.05$), health beliefs about HIV/STDs ($\chi^2 = 4.57$, OR = 0.52, CI = ±0.43, $p < 0.05$), worrying about HIV/STDs ($\chi^2 = 4.83$, OR = 0.53, CI = ±0.40, $p < 0.05$), unprotected sexual intercourse during the past 3 months ($\chi^2 = 9.42$, OR = 2.74, CI = ±2.48, $p < 0.01$) and refusal skills ($\chi^2 = 4.11$, OR = 0.51, CI = ±0.46, $p < 0.05$) were observed to be statistically significant protective factors for recent condom use during the past 30 days. In addition, positive reasons (pros) to use condoms ($\chi^2 = 4.11$, OR = 1.87, CI = ±1.55, $p < 0.05$), condom-carrying ($\chi^2 = 7.80$, OR = 2.43, CI = ±2.43, $p < 0.01$), intentions regarding unprotected sex in the next 3 months ($\chi^2 = 4.54$, OR = 0.55, CI = ±0.40, $p < 0.05$), and refusal skills ($\chi^2 = 5.02$, OR = 0.43, CI = ±0.47, $p < 0.05$) were also observed to be statistically significant protective factors for short-term condom-use intentions during the next 30 days. Other less protective factors for recent condom use during the past 30 days included age of sexual debut ($\chi^2 = 2.83$, OR = 1.63, CI = ±1.25, $p < 0.10$) and social relations or personal connectedness to HIV/STDs ($\chi^2 = 3.81$, OR = 1.78, CI = ±1.40, $p < 0.10$); whereas, those for condom-use intentions during the next 30 days were associated with condom-use beliefs ($\chi^2 = 3.26$, OR = 1.72, CI = ±1.37, $p < 0.10$) and health beliefs ($\chi^2 = 2.84$, OR = 0.64, CI = ±0.44, $p < 0.10$), respectively (see Table 3).

DISCUSSION

Several observations were derived from the baseline findings of this research project regarding condom-use behaviors. First, the study data clearly documented that urban young adult African American males between the ages 18-24 years remain a high-risk group for risky sexual behaviors, including HIV/STD infections. For example, 87% of study participants had engaged in early sexual debut by aged 15 years, 90% had each used alcohol and marijuana, 84% had engaged in recent sexual intercourse during the past 30 days, 79% had inconsistently used condoms during the past 3 months (such as never used condoms, rarely used condoms or used condoms about half the time), and 44% had engaged in sexual intercourse without condom use during the past 3 months (i.e., unprotected sexual intercourse about half the time, more than half the time and always), respectively. Also, while study participants were somewhat or very worried about contracting HIV (47%) and STDs (45%), interestingly, they reportedly assumed that their chances (i.e., somewhat or very likely) of contracting HIV (15%) and STDs (20%) were relatively very low. Similar to these findings, evidence of high-risk sexual behaviors among African American males have been previously reported.[35-40] For example, a study on condom-seeking behaviors among 224 African American STD-related clinic attending males reported that 66% of the sample with a main partner and 33% of those with other types of sexual partners were not motivationally ready to consistently use condoms.[36]

Second, the findings from this baseline study also revealed that African American males are impacted by HIV/STD-related health consequences. For example, study participants were more likely to personally know someone with HIV/AIDS (27%) and STDs (56%) and who had died of AIDS (26%). Also, a greater proportion of study participants had been tested for HIV (65%) and other STDs (60%), and approximately one third (30%) had been treated for STDs. These findings strongly suggest that African American males are significantly impacted by the psychosocial and/or health-related consequences of HIV/STD-related infections and support the need to incorporate materials on behavioral skills and prevention knowledge, as essential components, into the development of condom promotion programs, especially for

high risk populations such as inner-city sexually experienced young adult African American health-seeking males.[15,16,23,27,28]

Third, communication with peers and relationship dynamics with sexual partners were identified as protective factors for these innercity young adult African American males. For example, a majority (70%) of study participants reportedly talked to their peers and friends about condoms and they were more likely(49%) to also talk to them about condom-related concerns. Further, a majority (50%) of study participants felt that their sexual partners considered HIV/STDs to be an important health issue and 53% preferred that they used condoms during sexual encounters. Such findings have significant implications for program development for this high-risk urban populations regarding the incorporation and strengthening of program components on peer and partner-related condom communication,[23,41] self-efficacy,[14,23,29,30,41] decision dynamics (e.g., condom-use negotiation),[14,23,28,29,30] and contraceptive use,[23,30] among others. These findings also lend credence to one of our study's theoretical models, the social cognitive theory[29] and further supported by prior findings from other HIV/STD-related prevention programs with evidence of effectiveness.[3,23,32,35,42]

Fourth, the data clearly debunked the myths surrounding condom-carrying by sexually experienced individuals. For example, study participants were significantly more likely to carry condoms (51%), know where to get condoms when they need them (93%), could comfortably ask for condoms from convenience stores (90%) and public health clinics (95%), and significantly disagreed with the notion that people carrying condoms were just looking for sex (74%) or wanted to have sex with anyone (64%). These findings lend credence to the importance of condom-carrying by high-risk sexually experienced young adult males, as well as strongly support the importance of incorporating condom-carrying skills, as a vital component, in the development of condom promotion programs for this population.

The most important contribution of this study on condom use is the fact that largely different sets of predictors had emerged for retrospective (past 30 days) relative to prospective (next 30 days) condom-use behaviors (see Table 3). The similarity in the predictors of condom use revealed that health beliefs regarding HIV/STDs and refusal skills relatively predicted retrospective and prospective condom-use behaviors. Specifically, retrospective condom-use behavior was predicted by older age of sexual debut, favorable attitudes toward condom use, social relations (or personal connectedness) to HIV/STDs, worrying about contracting HIV/STDs, and prior 3-month behaviors regarding unprotected sexual intercourse. On the other hand, prospective condom-use behaviors (or intentions) were predicted by positive reasons (pros) to use condoms, condom-use beliefs, condom-carrying skills, and future 3-month intentions regarding unprotected sexual intercourse, respectively. Because the literature documents that prior evidence of condom-use behaviors is a relatively good predictor of condom-use intentions,[8,14,37,43] its implication, for the purpose of this study, is that variables that promoted retrospective condom-use behaviors must be strengthened during program development (and implementation) in order to effectively enhance and promote prospective condom-use behaviors, as well as condom use, especially for young adult urban African American males who are traditionally least likely to use condoms during sexual activities.

While we have clearly demonstrated that the baseline findings from this research study may have significant public health implications regarding the condom-use behaviors of urban African American males, as well as the development of condom promotion programs for this population, limitations exist. They included self report of condom-use behaviors, include target group and venue selection biases. However, the use of qualitative and quantitative methods, sound theoretical models, insights of the target population, and utilization of key informants to develop study materials and valid assessment items for survey development potentially support the study's findings. Nevertheless, the need for additional research to further explore

the issues of retrospective and prospective condom-use behaviors in order to promote consistent and effective condom use, including HIV/STD-related prevention strategies, for this high-risk urban male population remains a significant public health concern.

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TABLE 1

THE INTERNAL CONSISTENCY RELIABILITIES OF MODIFIED SCALES AND NUMBER OF ITEMS

Variables (or Psychometric constructs)	**α**	**κ**
Condom use past 30 days	N/A	1
Condom use next 30 days	N/A	1
Positive reasons to use condoms (pros)	0.72	5
Negative reasons to use condoms (cons)	0.70	5
Condom use beliefs	0.62	9
Sexual debut	N/A	1
Substance use	0.41	4
Peer communication	0.72	2
Favorable condom use attitude	0.70	10
Perceived susceptibility	0.91	2
Condom carrying	N/A	1
Condom accessibility	0.73	3
Condom use support	0.29	7
Social relations/personal connectedness to HIV/STD	0.44	3
Health beliefs	0.36	7
Worrying about HIV/STDs	0.94	2
Condom use efficacy	0.73	4
Unprotected sex past 3 months	N/A	1
Unprotected sex next 3 months	N/A	1
Refusal skills	N/A	1

α, Cronbach

κ, number of items per scale (or construct)

N/A, not applicable.

TABLE 2

DEMOGRAPHIC AND PSYCHOSOCIAL CHARACTERISTICS OF 136 YOUNG ADULT URBAN AFRICAN AMERICAN MALES

Variables	n	%
Ages (years)		
18-20	105	77
21-24	31	23
Education		
High school dropout	25	18
Presently in high school	70	52
Completed high school/GED	31	23
Vocation program, junior college, or university	9	7
Substance use		
Alcohol		
Yes	121	91
No	12	9
Marijuana (or weed)		
Yes	122	90
No	13	10
Ecstasy		
Yes	14	11
No	112	89
Other drugs (cocaine, crack, heroin, speed, inhalant)		
Yes	3	2
No	123	98
Age of sexual debut (years)		
12 years old or younger	43	31
13-15	75	55
16 or older	18	13
Sex past 30 days		
Yes	114	84
No	22	16
Condom use past 30 days		
Yes	64	56
No	51	44
Sex next 30 days		
Yes	123	91
No	12	9
Condom use next 30 days		
Yes	92	70
No	40	30
Frequency of condom use past 30 days		
Never/inconsistent	61	46
Relatively consistent	72	54
Health behaviors		
Know someone with HIV/AIDS		
Yes	36	27
No	99	73
Know someone who had died of AIDS		
Yes	35	26
No	100	74
Know someone with STDs		
Yes	75	56
No	59	44
Condom carrying		
Yes	70	51
No	66	49
Ever tested for HIV		
Yes	88	68
No	41	32
Ever tested for other STDs (chlamydia, gonorrhea, etc.)		
Yes	81	63
No	47	37
Treated for STDs		
Yes	41	32
No	88	68
Peer condom use		
None	5	4
Some/all	131	96
Peer communication		
Condom use		
Yes	95	70
No	41	30
HIV/STD prevention		
Yes	69	52

Variables	n	%
No	63	48

Percentages may or may not sum up to 100% due to responses such as do not know, undecided, rounding, etc. Also, some variables account for less than 136 subjects but their percentages are added up to 100% due to subsample (or population) responses and calculations.

GED, General Education Development; STDs, sexually transmitted diseases.

TABLE 3

MULTIPLE LOGISTIC REGRESSION PREDICTORS OF PRIOR AND FUTURE CONDOM USE: TESTS OF SIGNIFICANCE AND ODDS RATIOS

	Condom use past 30 days		*Condom use next 30 days*	
	56%[a]		*70%*[a]	
% Indicating use	*Wald χ^2 (1)*	*OR (95% CI)*	*Wald χ^2 (1)*	*OR (95% CI)*
Positive reasons to use condoms (pros)	1.63	0.68 (± 0.55)	4.11*	1.87 (± 1.55)
Negative reasons to use condoms (cons)	0.03	1.05 (± 0.77)	0.06	0.92 (± 0.80)
Condom use beliefs	1.99	1.58 (± 1.41)	3.26+	1.72 (± 1.37)
Sexual debut	2.83+	1.63 (± 1.25)	0.14	1.12 (± 0.88)
Substance use	0.11	0.90 (± 0.79)	0.49	0.81 (± 0.64)
Peer communication	1.06	1.38 (± 1.15)	0.47	1.24 (± 1.04)
Favorable condom use attitude	6.43*	2.73 (± 3.20)	1.30	1.58 (± 1.87)
Perceived susceptibility	0.60	1.24 (± 0.91)	0.25	1.15 (± 0.86)
Condom carrying	0.86	1.29 (± 0.92)	7.80**	2.43 (± 2.11)
Condom accessibility	1.90	1.55 (± 1.34)	0.46	1.24 (± 1.09)
Social relations/personal connectedness to HIV/STD	3.81+	1.78 (± 1.40)	0.35	1.19 (± 0.94)
Health beliefs	4.57*	0.52 (± 0.43)	2.84+	0.64 (± 0.44)
Worrying about HIV/STDs	4.83*	0.53 (± 0.40)	0.72	0.78 (± 0.60)
Condom use efficacy	0.20	0.87 (± 0.72)	2.03	1.52 (± 1.19)
Unprotected sex past 3 months	9.42**	2.74 (± 2.48)	2.41	1.66 (± 1.48)
Unprotected sex next 3 months	1.14	0.73 (± 0.57)	4.54*	0.55 (± 0.40)
Refusal skills	4.11*	0.51 (± 0.46)	5.02*	0.43 (± 0.47)

Note: Past 30 day analyses are based on the 115 participants who indicated that they had sex in the past 30 days and the next 30 day analyses are only based on the 131 participants who indicated that they planned on having sex in the next 30 days. Participants with missing data on any variable were not included in these analyses (or deleted listwise).

Significance levels:

STD, sexually transmitted disease.

** $p < 0.01$

* $p < 0.05$

+ $p < 0.10$.

[a] Denominators for these percentages are based only on those who indicated having sex in the past 30 days for past 30 day condom use and only on those who indicated planning on having sex in the next 30 days for next 30 day condom use.