

POPULATIONS AT RISK ACROSS THE LIFESPAN: PROGRAM EVALUATIONS

Factors Related to Risky Sexual Behaviors and Effective STI/HIV and Pregnancy Intervention Programs for African American Adolescents

Young Me Lee, Ph.D., R.N. Adanisse Cintron, M.S., R.N., and Surinder Kocher, M.S., R.N.

School of Nursing, DePaul University, Chicago, IL

Correspondence to:

Young Me Lee, Assistant Professor, School of Nursing, DePaul University, 990 W. Fullerton Ave, Chicago, IL 60614. E-mail: Ylee23@depaul.edu

ABSTRACT *Objective:* The purpose of this integrative literature review study was to investigate factors related to risky sexual behaviors among African American adolescents, to evaluate which of the factors are common across successful and effective STI/HIV and pregnancy intervention programs, and finally, to propose suggestions for future intervention programs for African American adolescents in West Englewood, Chicago. *Design:* An integrative literature review was conducted. Using CINAHL, PubMed, and ProQuest database, the following terms were searched: African American, Black, adolescents, teenagers, sexual behavior, cultural factors, pregnancy, STIs/HIV/AIDS, and intervention programs. *Result:* A total of 18 articles were reviewed, findings indicated there were five major contributing factors related to risky sexual behaviors: substance use, gender roles, peer influences, parental involvement, and level of knowledge and information on sex and STIs. Six successful STI/HIV and pregnancy programs that incorporated those factors to effectively reduce risky sexual behaviors were identified. *Conclusion:* After analyzing six national intervention programs proven to be effective, the findings suggest that future prevention programs should be designed with more emphasis on avoidance or limited substance use, increased parental involvement, integration of cultural teaching components such as storytelling and history as suggested from the Aban Aya Youth Project. This study also concluded that future prevention programs should consider the length of programs be longer than 1 year, as it has been shown to be more effective than shorter programs.

Key words: African American adolescents, intervention programs, pregnancy, sexually transmitted infections.

Background

Unplanned pregnancy and high rates of STI/HIV transmission are still significant epidemics facing adolescents in America. The Centers for Disease Control and Prevention (CDC, 2009) conducted a survey that revealed 46% of U.S. high school students have engaged in sexual intercourse. The survey reported that one in four female adolescents (aged 14–19) have contracted one or more of the following most commonly sexually transmitted infections

(STIs): human papillomavirus, chlamydia, herpes simplex virus, or trichomoniasis. The rate of STIs and unplanned pregnancy are consistently higher among African American (non-Hispanic Black) adolescents as compared to non-Hispanic White adolescents. Studies report it is because African American adolescents are more likely to have sex at an earlier age and to have more sexual partners. Consequently, these risky sexual behaviors put them at an increased risk of pregnancy and contraction of STIs/

HIV (CDC, 2003; National Campaign to Prevent Teen and Unplanned Pregnancy, 2011). The U.S. teen pregnancy rate for female adolescents ages 15–19 was 37.9 per 1,000 in 2009 and 34.2 per 1,000 in 2010, while that of the African American adolescents ages 15–19 was 56.7 per 1,000 and 51.5 per 1,000, respectively (Martin, Hamilton, Ventura, Osterman, Wilson, & Mathews, 2012). The U.S. Department of Health and Human Services (USDHHS) reported that gonorrhea rates were highest in non-Hispanic Black adolescents between the ages of 15 and 19 (2012). Furthermore, African American adolescents, ages 13–24 years, accounted for 65% (5,404) of the total incidence of HIV infection in the United States in 2009 (CDC, 2009).

Teen pregnancy and STI. With the advent and rigorous nationwide implementation of teen pregnancy and STI intervention programs, teaching and discussing safe sex practices, and adolescents choosing to abstain from sex, the rates of unplanned pregnancy and STI transmission among the general teenage population have decreased since 2009 (Bowers, 2007; Martin et al., 2012). In fact, the birth rate for the U.S. teenagers ages 15–19 fell 5% in 2010 to 34.2 per 1,000 (from 37.9 per 1,000 in 2009), reaching the lowest level reported in the United States in seven decades (Martin et al., 2012). There has been a steady decline in the number of birth rates from African American adolescents with a 17% decrease from 2007 to 2010 (Martin et al., 2012). The steady declines in teen birth rates and STI rates have been associated with the strong prevention messages directed toward adolescents (Martin et al., 2012). Rates of both teen pregnancy and STIs are decreasing steadily among the African American adolescent population, yet those rates in this population still remain substantially higher than the U.S. teen population.

The issues of STIs and teen pregnancy are of serious concern on the south side of Chicago in the community known as West Englewood. This community is predominantly African American (97.6% of the total population for the area) and still reports high rates of teen births, infant morbidity and mortality, and STIs. Of Chicago's 77 distinctive communities, West Englewood continues to have the highest teen birth rate, 116.9 per 1,000 adolescents (City of Chicago, 2012). This is almost twice as high

as the Illinois state rate (36.1 per 1,000 in 2009) (City of Chicago, 2012). In addition, the rates of STI/HIV infections are significantly higher than other communities, for example, 777.4 cases per 100,000 of gonorrhea in West Englewood compared to 292.8 per 100,000 in Chicago and chlamydia rates of 2,129.3 per 100,000 in West Englewood compared to 938.1 per 100,000 in Chicago in 2009 (City of Chicago, 2011).

Teen pregnancy and STI prevention are one of the CDC's top priorities. The goals are to reduce the rates within priority populations and promote health equity among adolescents by implementing teen prevention programs (CDC, 2009). Various programs, including the Adolescent Health Program (APH) and the Family Planning Program, have been developed and implemented on the community level for vulnerable populations, such as African American adolescents living in West Englewood. However, there is a persistent gap between best practices in sexual education and what is realistic for African American adolescents living in an economically and educationally disadvantaged community (Ott, Rouse, Resseguie, Smith, & Woodcox, 2011). Resources are often limited in the West Englewood community, thereby, negatively impacting the sustainability of programs, and adaptations to local and national programs generally must be made to target specific community health needs (Ott et al., 2011). Furthermore, there is limited synthesis of published data describing factors influencing African American adolescents' sexual behaviors, common factors across intervention programs found to be effective in reducing STI/HIV, and unplanned pregnancy rates for African American adolescents.

Research questions

The purpose of this study was to investigate factors related to risky sexual behaviors among African American adolescents to evaluate which factors are common across successful STI/HIV intervention programs and to propose suggestions for future intervention programs targeting African American adolescents living in West Englewood, Chicago. The findings of this study will be used to develop culturally sensitive and tailored intervention programs for African American Adolescents living in West Englewood and similar urban neighborhoods.

1. What contributing factors play an essential role in the risky sexual behaviors of African American adolescents?
2. Which of the factors are common across successful STI/HIV intervention programs that effectively reduce the risky sexual behaviors, STI/HIV, and pregnancy rates among this population?
3. What effective curriculum components/factors can be suggested for future STI/HIV and pregnancy intervention program planning in West Englewood, Chicago?

Methods

Design

An integrative literature review was conducted to provide a comprehensive search of the literature on effective STI/HIV and pregnancy prevention programs developed for African American adolescents in the United States. It also helped to identify contributing factors leading to the increasing rates of pregnancy and STI/HIV in African American adolescents in Chicago's West Englewood community. An integrative literature review is the broadest type of research review method that includes the review of both experimental and nonexperimental research on a given topic of concern (Whittemore & Knafl, 2005). In this case, the topic included factors that influence sexual behavior of African American adolescents and an investigation of effective STI/HIV and pregnancy prevention programs focused primarily on African American adolescents. The research method provides an accurate summary of previously conducted research and plays an important role in finding information that is fundamental to understanding the topic.

Measures

A review of the available literature related to adolescent sexual behavior in a predominantly African American community was conducted using several disciplines, including contributing factors, intervention programs and nursing related to adolescent STI/HIV and pregnancy rates. A search was performed using CINAHL and PubMed, as well as

public health resources, such as the CDC and the USDHHS. Peer reviewed articles were analyzed, government resources were evaluated, and common factors within each discipline were used to answer each of the research questions. The search terms included: African American adolescents, STI, HIV/AIDS, STD (sexually transmitted disease), adolescent pregnancy, teen pregnancy, intervention/prevention programs, contributing factors, and cultural factors.

Analytic strategy

The first research question sought to identify factors that play an essential role in risky sexual behavior of African American adolescents. Articles were reviewed to find relevant information that addressed factors related to sexual behaviors among African American adolescents. The following criteria for articles used in this search included:

- A study population that included African American adolescents
- Articles published from 1993 to 2013
- Statistical acknowledgment of high-risk sexual behavior among African American adolescents

A total of 97 articles were found and of those, 18 articles met the search criteria and were selected. The rates of unplanned pregnancy and STI/HIV transmission in African American adolescents have been consistently high since the early 1990s. Thus, articles published from 1993 to 2013 were chosen and reviewed to determine the possible recurrence of themes related to factors influencing sex behaviors of African American adolescents over two decades (Martin et al., 2012). Findings from various surveys and interviews, as shown within the reviewed articles, demonstrated a commonality of external factors contributing to African American adolescent sexual behavior, which were categorized into five overarching factors.

To address the second research question, a study conducted by the USDHHS in 2012 was used to analyze the different components used in national intervention/prevention programs that have shown to be effective in reducing STI/HIV transmission and pregnancy within the adolescent African American population. The HHS reported on 31 programs that were found to be effective in preventing teen pregnancies or births, reducing STIs,

or reducing rates of associated sexual risk behaviors—defined by sexual activity, contraceptive use, or number of partners (2012). The following inclusion criteria were used to select the evidence-based programs for this study:

- Intervention programs evaluated and articles published between 2002 and 2013
- Intervention programs shown to be effective by the USDHHS
- Intervention programs that focused on reducing HIV/STI transmission and pregnancy in adolescent populations and implemented programs in an urban area
- Total number of study participants greater than 450
- African American study population comprising greater than 50% of total study population

Of the 31 programs that proved to be effective by HHS, six STI/HIV and pregnancy intervention programs met the inclusion criteria and were selected to address the second research question. Information about these six programs was compiled into a matrix that recorded the purpose of the program, research design/sample/setting, theoretical framework, description of the interventions, program outcomes on behavior changes, and factors related to sexual practice (Table 1).

The third research question sought to make suggestions for future STI/HIV and unplanned pregnancy prevention program planning in West Englewood, Chicago. Identifying factors contributing to African American adolescent sexual practices yielded understanding of aspects of African American culture and sexual influences. African American cultural awareness, along with components incorporated in prevention programs that were found to be effective in reducing rates of STI/HIV and unplanned pregnancy allowed for the suggestion of components to be included in future programs targeting West Englewood, Chicago and its predominantly African American adolescent population.

Results

Factors related to risky sexual practices among African American adolescents

Among 18 articles reviewed, five factors were identified as contributors to risky sexual practices

among African American adolescents. These factors include: substance use, gender roles, peer influences, parental involvement, and level of knowledge and information on sex and STIs.

Substance use. Substance use among adolescents is increasing. It is known that use of substances, such as alcohol, marijuana, and other drugs, yields impaired judgments and lowered inhibitions. When use of alcohol was reported, an increased probability of sexual activity was found in both African American males (96%) and African American females (85%) (Perkins, Meilman, Leichter, Cashin, & Presley, 1999). This knowledge can translate to an understanding of increased risky sexual practices among adolescents while under the influence of substances, including alcohol and illicit drugs, leading to decreased contraceptive use. A study conducted by Elkington, Bauermeister, and Zimmerman (2011) also found that drug use, particularly alcohol use, was strongly related to sexual activity. The probability of 15-year-old girls being virgins decreased from nearly 100% for those who have never drunk to less than 20% for those who drank every day. This decrease in probability of virginity status was similar for 15-year-old boys and 18-year-old girls (Elkington et al., 2011). Furthermore, Bachanas et al. (2001) found that adolescents in this study who engaged in substance use were more likely to engage in sexual behaviors that put them at greater risk for STI/HIV transmission and unplanned pregnancy.

Gender roles. Gender differences have been identified in previous research, noting that African American adolescent males are more likely to sexually debut at a younger age and have more partners, whereas females are less likely to use condoms (CDC, 2003). Heatherington, Harris, Bausell, Kavanagh, and Scott (1996) and Osmond et al. (1993) reported that women tend to feel powerless in the negotiation of condom use during sexual intercourse with their partners. In addition, self-esteem enhancing reasons for engaging in risky sexual behavior have been studied and correlated with gender-specific sex behaviors and practices. Robinson, Holmbeck, and Paikoff (2006) found that males were more likely to report self-esteem enhancing reasons for having sex, such as “to make yourself feel better” or “to feel proud of yourself”

Table 1. Six Effective National Adolescent STI/HIV and Pregnancy Prevention Programs

Program and purpose	Design/Sample/Setting	Theoretical framework	Program description	Program outcomes on behavior	Factors r/t sexual practice
Aban Aya Youth Project To promote abstinence from sex, to teach students how to avoid drugs and alcohol and how to resolve conflicts nonviolently	Cluster randomized trial Recruited $N = 1,153$ (5th–8th grade participants) 91% African American and 50.5% female, 49.5% male Recruited $n = 12$ high-risk metropolitan schools in Chicago, IL at baseline, divided into three conditions: • Social development curriculum (SDC; $n = 4$); • School/community intervention (SCI; $n = 4$); • Control group – health enhancement curriculum (HEC; $n = 4$)	n/a	School-based, Afro-centric SDC instructed over a 4-year period, beginning in 5th grade. SDC included 16–21 classroom-based lessons (40–45 min) per year SCI included SDC plus a parent/community element that focuses on all the social domains of influence on children HEC focused on general health, nutrition, and physical activity African teaching methods were incorporated into content components. Posttests and follow-ups in the fall and spring of 5th grade and annually in the spring of 6th, 7th, and 8th grades	Increased use of condoms Reduced frequency of sexual intercourse in males Other Reduced rate in violent behavior in males Reduced rate in school delinquency in males Reduced rate of drug use in males	Provided information about abstinence, behavioral skills development, contraceptive education; self-efficacy/self-esteem; Sexuality/HIV/AIDS/STI Education
Be Proud! Be Responsible! To affect knowledge, beliefs, and intentions related to condom use and sexual behaviors	Cluster randomized trial Recruited 86 community-based organizations (CBOs) at baseline, divided into treatment and control conditions 3,445 adolescents aged 13–18 received the intervention 90% African American and 56% female, 44% male 1,707 participants (863 in the HIV/STD-intervention CBOs and 844 in the control intervention CBOs) were randomly selected for the follow-up sample	Social cognitive theory	Six session curriculum delivered over the period of six 1 hr sessions in variety of settings (Building Knowledge about HIV and AIDS; Understanding Vulnerability to HIV Infection; Attitudes and Beliefs about HIV, AIDS, and Safer Sex; Building Condom Use Skills; and Building Negotiation and Refusal Skills). Delivered through group discussions and exercises, videos, games, and role-play. Group size – ideally 6–12 per group Pre- and posttests; and follow-up at 3, 6, and 12 months postintervention	Increased use of condoms Increased use of condoms	Provided information about HIV, STDs and pregnancy, and prevention strategies

(continued)

TABLE 1. (Continued)

Program and purpose	Design/Sample/Setting	Theoretical framework	Program description	Program outcomes on behavior	Factors r/t sexual practice
Children's Aid Society-Carrera Program To empower and help youth in developing personal goals, the desire for a productive future, and in developing their sexual literacy	Randomized controlled trial (Experimental design) Recruited from six New York City youth agencies African American and Latino aged 13–15 55% female; 45% male and 56% African American; 42% Hispanic; 2% other 484 youth at baseline, divided in half into treatment and control conditions	Developmental assets/ Resiliency theory	Uses a long-term, holistic approach After school program or community-based organization Recruits boys and girls aged 11–12 and follows them through high school and beyond. Seven fundamental components – Education; Job Club; Family Life and Sexuality Education (FLSE); Self-Expression; Lifetime Individual Sports; Full Medical and Dental Care; and Mental Health Services Program activities run all five weekdays for about 3 hr per day Classroom-based curriculum focused on benefits of remaining abstinent until marriage and risky sexual activity	Reduced frequency of sexual intercourse and incidence of pregnancy within females Increased use of condoms within females Increased use of hormonal method of contraception No difference between treatment and control groups in sexual and reproductive behavior Less likely to report having ever had sex.	Provided age appropriated comprehensive sex education
Heritage Keepers Abstinence Education To reduce the number of adolescents initiating sexual activity and increase the number of sexually active adolescents returning to abstinence	Quasi-experimental design 2,214 participants 7th–9th grade students from 34 program schools and seven comparison schools 63% African American and 58% female, 42% male Recruited $n = 2,214$ at baseline, divided into treatment ($n = 1,828$) and control ($n = 387$) condition	n/a	450 min interactive curriculum for middle and/or high schools Presented in 45-min class periods over 10 sequential school days or in 90-min sessions for five consecutive days. Five sections of content material: Sexual Abstinence; Family Formation; STD Facts; Love, Lust, Infatuation; and The SAFE Plan	Delay onset of first sexual intercourse	Provided information about reproductive systems and STIs Benefits of sexual abstinence in terms of immediate risks, such as unwanted pregnancy and STDs, and in terms of helping youth prepare for family formation in the future

(continued)

TABLE 1. (Continued)

Program and purpose	Design/Sample/Setting	Theoretical framework	Program description	Program outcomes on behavior	Factors r/t sexual practice
Promoting Health Among Teens (PHAT) To reduce the risk for HIV, STIs, and unwanted pregnancy through behavior modification and building knowledge	Randomized controlled trial (experimental design) 662 participants and 53% female; 47% male Targeting African American students in grades 6 and 7 Participants randomly assigned to one of five conditions: (1) 8-hr abstinence-only intervention, (2) 8-hr safer sex-only intervention, (3) 8-hr comprehensive abstinence and safer sex intervention, (4) 12-hr comprehensive abstinence and safer sex intervention, or (5) 8-hr general health promotion program serving as a control group	Social Cognitive Theory, Theory of Reasoned Action, and Theory of Planned Behavior	Twelve modules delivered over two to three consecutive Saturdays for a period of 8 or 12 hr. Intervention manual structured around group discussions, videos, games, brainstorming activities, skill-building, and experiential exercise. Four modules targeted to encouraging abstinence; four modules targeted to encouraging condom use; and four cover general content related to HIV/STI knowledge. Survey before intervention (baseline) and follow-up at 3, 6, 12, 18, and 24 months postintervention	Reduced sexual initiation seen in abstinence-only intervention Reduced recent sexual intercourse in abstinence-only and 12-hr comprehensive interventions Reduced number of multiple sexual partners in both comprehensive intervention groups	Provided information about abstinence, safe sex practices, pregnancy prevention, and the prevention of HIV and STIs
Teen Health Project To increase abstinence from sexual intercourse and increase condom use	Randomized, controlled, multisite community-level intervention trial Mean age 14.5 years and 50% female, 50% male 51% African American, 20% Asian, 29% other Recruited $n = 1,172$ participants at baseline from 15 housing developments, divided into three conditions. Control intervention, Workshop Intervention, Community Intervention	Diffusion of innovations and social cognitive theory	Community-level intervention that helps adolescents develop skills to enact change, provides continued modeling, peer norm, and social reinforcement for maintaining the prevention of HIV risk behavior Control intervention consisted of a standard community HIV/AIDS education session Workshop intervention consisted of two 3-hr workshops conducted separately for males and females. Free condoms were given to the adolescents. Baseline data and follow-up at 3 and 12 months after the workshops	Increased use of condoms Delayed onset of first sexual intercourse	Provided information on behavioral skills development; contraceptive education; self-efficacy/self-esteem; Sexuality/HIV/AIDS/STI Education

and those males reported more sexual partners over their lifetime. Males were also more likely to endorse power-related reasons for having sex, including “to control partner” or “that you owed your partner or you had to have sex” and those who did tended to sexually debut earlier (Robinson et al., 2006). Many researchers argue that the social dynamics of African American male culture encourages sexual relationships and promiscuity (Staples & Johnson, 1993).

Peer influences. Adolescents are at a developmental stage in which relationships with peers are of great importance. Teens tend to believe that what is observed of their peers is what defines normal adolescent behavior. Researchers have found that perceived peer norms and behavior are also strongly associated with risky sexual behavior (Elkington et al., 2011). Acceptance by peers is widely sought, which can impact an adolescent’s judgment and decision making; therefore, adolescents in peer groups whose members engage in risky behaviors, often engage in similar behavior. African American adolescents whose peer groups demonstrated antisocial-like behavior such as illegal use of drugs and alcohol were more likely to engage in early sexual intercourse and promiscuity (Leigh & Andrews, 2002). Furthermore, the fact of whether an adolescent has ever had sexual intercourse is strongly influenced by the sexual status—virgin or nonvirgin—of his or her friends (Leigh & Andrews, 2002).

Parental involvement. Parental monitoring was found to be a significant predictor of adolescent sexual activity. Donenberg, Paikoff, and Pequegnat (2006) identified parental involvement and family cohesion as strong influences in the development of healthy romantic relationships and practice of safer sexual behavior among African American adolescents. Closer family relationships and greater parental involvement are associated with a number of low-risk sexual practices such as lower exposure to risky situations, greater rates of condom use, and later sexual debut in adolescents (Donenberg, Bryant, Emerson, Wilson, & Pasch, 2003). A study that identified the age of sexual debut of African American adolescents and analyzed various contributing factors—including parental involvement—found that as parents who knew the whereabouts of

their adolescent children had adolescents that were more likely to be virgins (Elkington et al., 2011; Somers & Ali, 2011). On the other hand, adolescents of families with less parental involvement or familial cohesiveness, characterized by conflict, parental substance abuse, and neglectful or unresponsive family relationships were more likely to engage in risky sex practices (Donenberg et al., 2006).

Level of knowledge and information on sex and STI/HIV. The lack of appropriate information regarding protected sexual behaviors and low knowledge related to consequences of risky sexual behavior, such as unplanned pregnancy and transmission of STIs, were found to be an accurate indicator of such risky sex practices among African American adolescents. According to a study by Reitman et al. (1996), males who reported lower confidence in initiating protective sex practices and perceived themselves at lower risk for contracting STI/HIV were most likely to engage in high-risk behaviors. The 2001 Youth Risk Behavior Surveillance found that 81.2% of Black males compared to 63.6% of Black females reported using condoms at last sexual intercourse (CDC, 2003). Furthermore, Beckman, Harvey, and Tiersky (1996) and Norris and Ford (1998) reported that teenagers often report buying and/or using condoms is embarrassing; some also note diminished physical pleasure of sexual intercourse with the use of condoms. In a study conducted regarding the awareness of HIV/AIDS and the knowledge of the virus’s transmission, only 2.8% (306) of the women who reported both being aware of the virus and having knowledge of its transmission had sex with a casual acquaintance or someone they just met (Booyesen & Summerton, 2002).

Effective National STI/HIV and Pregnancy Prevention Programs

The following is a brief description of the six STI/HIV and abstinence intervention programs meeting the inclusion criteria: Aban Aya Youth Project; Be Proud! Be Responsible!; Children’s Aid Society-Carrera Program; Heritage Keepers Abstinence Education; Promoting Health Among Teens; and Teen Health Project. Table 1 indicates the components that each of the intervention programs implemented to promote healthy sexual behaviors.

Table 2. Contributing Factors Integrated in the Selected Intervention Programs

	Aban Aya Youth Project	Be Proud! Be Responsible!	Carrera Adolescent Pregnancy Prevention Program	Heritage Keepers Abstinence Education	Promoting Health Among Teens (PHAT)	Teen Health Project
National Intervention Programs Shown to be Effective						
Five contributing factors						
Substance abuse	X					
Gender roles	X			X	X	X
Peer influences	X			X	X	X
Parental involvement	X		X			X
Level of sex/HIV/STI knowledge	X	X	X	X	X	X

Table 2 presents the components that were common across the six successful STI/HIV intervention programs.

Aban Aya Youth Project. The Aban Aya Youth Project is an Afro-centric social development curriculum (SDC) designed to reduce rates of risky behaviors among African American children in grades 5 through 8 (Flay, Graumlich, Segawa, Burns, & Holliday, 2004). The name of the intervention derives from two symbols in the Akan (Ghanian) language: Aban stands for fence and signifies double/social protection, and Aya, an unfurling fern signifying self-determination. This project includes interventions that address all of the five factors identified as related to risky sexual behaviors. The Aban Aya Youth Project was designed to administer in sixteen to twenty-one 40 to 45 min lessons per year at 12 high-risk metropolitan schools in Chicago, IL. It used African teaching methods, such as storytelling and African American history and literature, to promote abstinence, to teach the avoidance of drugs and alcohol, and to teach nonviolent conflict resolution; it was implemented over a 4-year span (USDHHS, 2012). The 12 schools were selected for this project and randomly divided into three study groups: four schools were chosen to implement the Aban Aya SDC; four schools implemented the Aban Aya curriculum plus additional school and community support programs [school/community intervention (SCI)]; and the other four schools served as the control group that implemented a general health curriculum focusing on nutrition, physical activity, and general health

curriculum (health enhancement curriculum). Students completed surveys in the classrooms at the beginning and end of 5th grade and at the end of each subsequent year. Flay et al. (2004) found that for boys, the SDC and SCI significantly reduced the rates of violent behavior, provoking behavior, school delinquency, drug use, and recent sexual intercourse, and improved the rate of increase in condom use. The SCI showed to be more significantly effective than the SDC alone. No significant effects were shown for girls. Overall, this program reported that theoretically derived social-emotional programs that are culturally sensitive, developmentally appropriate, and offered in multiple grade levels can reduce multiple risk behaviors for inner-city African American adolescents (Flay et al., 2004).

Be Proud! Be Responsible!. “Be Proud! Be Responsible!” is a six-module curriculum that is designed to give adolescents the knowledge, motivation, and skills necessary to change their behaviors in ways that will reduce their risk of contracting HIV/STIs and getting pregnant (Jemmott, Jemmott, & Fong, 2010b; Jemmott, Jemmott, Fong, & Morales, 2010a). The only factor related to risky sexual behavior that this program addressed was level of knowledge and information. It was implemented in 43 community-based organizations (CBOs) and delivered through group discussions, exercises, videos, games, and role-play. Before implementing the program, the program facilitators were trained in the core content components of the program. The components included: information on HIV/STIs, pregnancy, and prevention strategies;

addressing behavioral attitudes and outcome expectancies; building negotiation and problem-solving skills; building self-efficacy and desire to practice abstinence; and building individual's confidence in skills by incorporating positive reinforcement (Jemmott et al., 2010a,b). The control group received a general health promotion intervention. Surveys were administered before the intervention (baseline) and at 3, 6, and 12 months postintervention. Results from this study showed that there was a significantly greater percentage of consistent condom use in the participants in the CBOs that implemented "Be Proud! Be Responsible!" (Jemmott et al., 2010a,b). Overall, this study suggested that CBOs can achieve success when implementing evidence-based HIV/STI risk-reduction interventions with adolescents.

Children's Aid Society: Carrera Adolescent Pregnancy Prevention Program (CAS-Carrera Program). The purpose of the CAS-Carrera program is to empower and help adolescents in developing personal goals, developing the desire for a productive future, and developing their sexual literacy. The program uses a philosophy that sees the adolescents as "at promise" instead of "at risk" and focuses on reducing pregnancy by using a comprehensive youth development approach that includes sexuality education and contraceptive provision to those who become sexually active (Philliber, Kaye, Herrling, & West, 2002). It emphasizes the importance of sexual health education and parental involvement to have positive program outcomes. The intervention is guided by six principles: (1) the staff treats the adolescents as if they were their own, (2) adolescents are viewed as having pure potential, (3) a holistic approach is used to incorporate multiple services to meet comprehensive interests and needs, (4) contact with each adolescent is continuous and long-term, (5) services aim to involve parents and other adults, and (6) services are offered under one roof in the community in a nonpunitive, gentle, generous, and forgiving environment (Philliber et al., 2002). These principles are instilled in the program's seven critical components: five activity components and two service components.

The five program activities are as follows: (1) a work related intervention called Job Club, (2) an academic component including tutoring and assis-

tance with college admissions process, (3) a comprehensive family life and sexuality education, (4) an arts component designed to help adolescents discover and develop talent and confidence, and (5) an individual sports component that emphasizes activities requiring impulse control that can be practiced at all ages (Philliber et al., 2002). The two service components are providing mental health care and providing medical care. Results from the 3-year program evaluation found a gain in knowledge in sexual, reproduction, and health care; females were more likely to say they had chosen not to have sex when pressured; females were less likely to have ever had intercourse; sexually active females were more likely to use a condom while on an additional contraceptive method; and females in the CAS-Carrera Program showed significantly lower rates of pregnancies and births than the control group females (Philliber et al., 2002). Overall, the CAS-Carrera Program was successful in accomplishing many goals by building long-term relationships with the students and reinforcing sexuality education and academic skills.

Heritage Keepers Abstinence Education. Heritage Keepers Abstinence Education is a 450-min interactive classroom-based curriculum that teaches students the benefits of remaining abstinent until marriage and the risks associated with premarital sexual activity (Badgley, Musselman, Casale, & Badgley-Raymond, 2011). Three factors including gender roles, peer influences, and level of knowledge and information were incorporated in the educational program. The material is presented during required health classes on consecutive days in either five 90-min or ten 45-min sessions. The curriculum content is grouped into five sections: Sexual Abstinence; Family Formation; STD Facts; Love, Lust, Infatuation; and The SAFE Plan. Each section contains writing exercises, discussion, and activities. Teachers are trained by Heritage Community Services to apply mediating constructs to the delivery of the program, and to engage the students in active learning processes that foster commitment to abstinence (Weed, Birch, Ericksen, & Olsen, 2011). The study found that a year after the program ended, students participating in the intervention were less likely to report having ever had sex. Overall, the authors stated that this study provided confirmation to the primary prevention/risk

elimination strategy for programs and policy by demonstrating a reduction of sexual experience among adolescents (Weed et al., 2011).

Promoting Health Among Teens (PHAT).

PHAT uses two program approaches to reducing the risk for HIV, STIs, and unwanted pregnancy. The two approaches are PHAT – Abstinence-Only and PHAT – Comprehensive Intervention. The abstinence-only intervention is an 8-hr curriculum that encourages abstinence to help eliminate the risk of pregnancy and STIs (Jemmott, 2010b). Three factors including gender roles, peer influences, and level of knowledge and information were incorporated in the program. It was designed by Jemmott et al. (2010a,b) to (1) increase HIV/STI knowledge, (2) strengthen behavioral beliefs supporting abstinence including the belief that abstinence can prevent pregnancy, STIs/HIV, and that abstinence can foster attainment of future goals, and (3) increase skills to negotiate abstinence and resist pressure to have sex. Facilitators were trained to not portray sex in a negative light or to use a moralistic tone. The comprehensive intervention combined the abstinence-only intervention, a safer sex intervention that encouraged condom use, and HIV risk-reduction interventions. The intervention is presented in either 8 or 12 hr, and both contain similar content. Results from this study showed (1) reduced sexual initiation was seen in abstinence-only intervention, (2) reduced recent sexual intercourse was seen in the abstinence-only and the 12-hr comprehensive intervention, and (3) a reduced number of multiple sexual partners in both comprehensive intervention groups (8-hr, 12-hr). Overall, the results from this study indicate that a theory-based abstinence-only intervention reduced self-reported sexual involvement among African American students in grades 6 and 7 (Jemmott, 2010b).

Teen Health Project. The Teen Health Project is a community-based HIV prevention intervention that helps high-risk adolescents develop skills to enact change, and provides continued modeling, peer norm, and social reinforcement for maintaining the prevention of HIV risk behavior (Sikkema & Kelly, 2005). This project addressed four factors including gender roles, peer influences, parental involvement, and level of knowledge and

information. The Teen Health Project was administered in 15 low-income housing developments across the United States by randomly assigning one of the three intervention components to each development. Five developments were invited to attend a standard community AIDS education session (control intervention); five developments were assigned to attend two 3-hr workshops that focused on HIV/STI education and skills training to avoid unwanted sexual activity (workshop intervention); and the other five developments were assigned to attend the workshop intervention followed by a multicomponent, community intervention that included follow-up sessions, participation of opinion leaders, activities to create social and environmental supports for HIV risk avoidance, and HIV/AIDS workshops for parents (Sikkema & Kelly, 2005). Surveys were administered before the intervention and at follow-ups conducted 3 and 12 months after the workshops. Compared to the control group, results showed that both of the treatment groups showed an increase in condom use and an increase in abstinence. Sikkema and Kelly (2005) stated that the multicomponent, community intervention showed considerable promise and produced significant effects in relation to age of sexual debut over time and also in condom use for sexually active adolescents.

Suggestions for future prevention program planning in West Englewood, Chicago

The investigation of six intervention programs determined that only one—the Aban Aya Youth Project—incorporated components relative to all five factors identified as contributing to African American adolescent sexual behavior. This youth project was implemented over a 4-year span and used African teaching methods, such as storytelling and African American history and literature, to promote abstinence, to teach the avoidance of drugs and alcohol, and to resolve conflicts nonviolently (USDHHS, 2012). Study findings included: increased use of condoms; reduced frequency of sexual intercourse in males; reduced rate of violent behavior in males; reduced rate of provoking behavior in males; reduced rate of drug use in males; and reduced rate of school delinquency in males (USDHHS, 2012). Incorporation with this program, the future program needs to include a few more components to develop an effective program

targeting the African American population. The frequency and length of the program should be considered. Programs developed to meet at regular, repeated intervals and for more than 1 year were determined to be more effective than those with shorter durations or less frequent meetings (USDHHS, 2012). Furthermore, cultural competency is important when attempting to intervene in the lifestyle and habits of any person or community. Especially in a predominantly African American community, the need to understand the culture and be sensitive to relevant beliefs and traditions is vital to the successful implementation of an intervention program. As aforementioned, the Aban Aya Youth Project used African teaching methods, such as storytelling and African American history and literature, to discuss sex education topics with African American adolescents was a great success. Therefore, the researchers suggest the development of a future intervention program should be implemented for longer than 1 year and would include culturally sensitive topics in its teaching components.

Discussion

In this integrative literature review, five major factors related to sexual behaviors among African American adolescents were identified. Those included substance use, gender roles, peer influences, parental involvement, and knowledge and information on sex and STIs. These factors contribute to the increased risks of contracting a STI or getting pregnant. Consideration of those elements should be taken when developing a future intervention program for this population. As previous studies indicate, African American adolescents have higher levels of substance use than any other groups, which contribute to getting involved in more risky sexual behaviors. Thus, in education and prevention programs, it is very essential to address the impact of substance use in this population.

All six selected successful programs included HIV/STI and sexual behavior education. These programs reported an increase in knowledge regarding sex and STI/HIV transmission among the participants. Behavioral outcomes reported in those programs included: increased use of condoms; reduced frequency of sexual intercourse; reduced rate of

pregnancy; increased use of hormonal methods of contraception; delayed onset of sexual intercourse (recent and first time); and a reduced number of sexual partners. It is apparent that health and sexual education in this population is vital to make healthy sexual decisions, which in turn, reduces risky sexual behaviors and the consequences involved in such behaviors. After knowledge and information on sex and STIs, gender roles and peer influences were consistently found in four of the six STI/HIV intervention programs including Aban Aya Youth Project, Heritage Keepers Abstinence, PHAT, and Teen Health Project. Consideration of gender role shared by African Americans may be another key component for effective program outcomes. Three intervention programs included parental involvement as a program component to help parents facilitate the ability to communicate more effectively with their children about family life and sexuality issues. Of the six programs, the Aban Aya Youth Project was the only program that incorporated all five contributing factors into the curriculum.

The interesting finding discovered in this study was that program duration was found as another component that impacted program efficacy. Three programs (Aban Aya Youth Project, Carrera Program, and Teen Health Project) lasted from 6 months to 7 years, while the other three programs (Be Proud! Be Responsible!, Heritage Keepers, and PHAT) lasted from 1 to 8 days. As demonstrated in Table 1, results showed that programs implemented for over 6 months had more positive findings than those lasting 1–8 days (USDHHS, 2012). This finding suggests that future programs must consider a frequency of regular and repeated intervals with implementation of the program more than 6 months. Increased frequency and duration will help to retain STI knowledge and information and enhance safe sex practice. These findings established an overall understanding of behaviors related to sexual practices among African American adolescents and, subsequently, identified culturally appropriate intervention programs and program duration that can be recommended for future intervention programs in Chicago's predominantly African American West Englewood community.

Based on the factors demonstrated in the six effective intervention programs, a new program can

be developed to address the five contributing factors related to risky sexual behaviors seen among African American adolescents. Implementation of an improved, focused program will be essential in the reduction of high STI/HIV and pregnancy rates, as seen in West Englewood. After implementation, follow-up surveys can be done to determine the effectiveness of the program based on these study findings. Research on the current intervention programs implemented in Chicago and West Englewood can also be done to analyze curriculum and compare parallel contributing factors from this study.

The search for information associated with West Englewood from secondary sources provided factual and statistical information, which allowed for the determination of needs related to African American adolescent risky sexual behavior and the resultant consequences. However, there was a lack of first-hand determinants of the community needs by key figures within West Englewood. Having information from primary sources could potentially have led to a more thorough and culturally competent understanding of the needs of West Englewood, yielding an accurate compilation of factors to be included in future intervention programs targeting urban African American adolescents, particularly those at risk for unplanned pregnancy and STI/HIV transmission, in West Englewood.

The problems and findings reported in this study are applicable to urban communities and neighborhoods where the majority of the population is African American and has reported high rates of STIs and teen pregnancy. Public health nurses working with similar high-risk populations on STIs and teen pregnancy should consider the five factors identified in this study, especially gender roles, when providing sexual health education to African American adolescents. It may be a better approach to have separate sexual education programs for female and male African American adolescents in an effort to create an open environment that enhances active discussion and participation in the gender segregated education program. Furthermore, empowering female adolescents on how to say “no” and to protect themselves from risky sexual behaviors is another consideration when teaching this population. To reduce risky sexual behaviors among the African American adolescents, it is also essential to involve peers and parents who share similar cul-

tural values in the sexual education process. In summary, after analyzing six national intervention programs proven to be effective, the findings suggest that future prevention programs be designed with a greater emphasis on avoidance or limited substance use; increased parental involvement; and integration of cultural teaching components such as storytelling and history as suggested from the Aban Aya Youth Project. In addition, the length of future programs should be over 1 year, as longer programs have been shown to be more effective than shorter programs.

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