ABSTRACT
Rates of HIV/AIDS transmission have increased substantially, particularly among young African American women. According to the Centers for Disease Control and Prevention (CDC) HIV/AIDS is the number one killer for African American women aged 25 to 34. Given that many of these young women are contracting the disease in their late teens and early twenties, there is a need to develop interventions that directly address the needs of this group. The current study sought to assess the effectiveness of theater in increasing knowledge of HIV/AIDS and the likelihood of healthier sexual behavior and choices among 219 young African American women 18 to 39 years of age. Paired sample t-tests revealed that there were significant mean differences in knowledge and intended safe sex behavior after viewing the play. Young women who viewed the play reported increased knowledge of HIV and reported a higher likelihood of engaging in safer sex. Given the high rates of HIV/AIDS among young African American women, more innovative educational and prevention techniques are needed.

Keywords: Theatre, HIV/AIDS, African-American Women, Educational Interventions
INTRODUCTION

Currently there are 1.1 million individuals living with HIV/AIDS in the United States and 1 in 5 of those individuals are unaware of his/her status (Centers for Disease Control and Prevention, 2011). The Centers for Disease Control and Prevention (CDC) estimates that 42,959 people in the United States were diagnosed with HIV infection and 34,993 were diagnosed with AIDS in 2009.

African-American women continue to have the highest rates of HIV infection and AIDS diagnosis in the United States (CDC, 2011). In 2009, African-American women accounted for 14% of the U.S. population and represented 66% of women with an HIV diagnosis (CDC, 2011). The rate of an AIDS diagnosis in African-American women was more than 23 times higher than in white women in 2009 (CDC, 2011). In the year 2009, African-American women accounted for 87% of cases who contracted HIV/AIDS through heterosexual contact (CDC, 2011). African-American women, especially young African-American women, are particularly vulnerable to contracting HIV/AIDS.

Young African American Women and HIV/AIDS

In 2009, 8,300 young adults aged 13-24 reported an HIV infection to the CDC (CDC, 2011). African-American female adolescents were disproportionately affected by these numbers. Of the estimated 10,255 adolescent and adults, ages 13-24 diagnosed with HIV infection, 65% were African-American females (CDC, 2011). In 2009, 90% of the young women ages 13-24 with an AIDS diagnoses reported contracting AIDS through heterosexual contact (CDC, 2011). HIV/AIDS is a major health problem among young African-American women. At some point in their lifetime, 1 in 32 African-American women will be diagnosed with an HIV infection (CDC, 2010).

Young African-American women experience a unique set of challenges as they begin to mature. For instance, data on sexual behavior in youth indicate that 5.6% of African-American adolescent females had sex before the age of 13 compared to 2.2% of white adolescent females (CDC, 2011). While 51.8% reported having used a condom during their last sexual interaction, according to the CDC (2011), 18% of young African-American female high school students had engaged in sexual intercourse with more than 4 partners. Also, 15.2% of young African-American female high school students stated they used alcohol and drugs before their last sexual encounter (CDC, 2011e). Such high risk behavior makes them more susceptible to sexually transmitted diseases (STD) (CDC, 2011e). Young African-American women tend to have higher rates of STDs than other races/ethnicities, increasing their susceptibility for HIV infections (CDC, 2010).

The incidence of high-risk activities may be attributed to relationship dynamics. For example, some women might not insist that partners wear a condom out of fear that their partners will leave them as well as the stigma associated with a woman carrying condoms (“The Body”, 2011). Sexual inequality between young women and older men may also play a role (“The Body”, 2011). A CDC study of urban high schools showed that more than one-third of Black and Hispanic women had their first sexual contact with an older male (as cited in “The Body”, 2011). Given the challenges that young African-American women experience, prevention efforts are vital. Thus the purpose of the current study is to investigate the utility of dramatic plays in educating young African American women about HIV/AIDS.

Prevention & Intervention Efforts

With the knowledge that females’ rates of HIV/AIDS morbidity and new infections are highest among African-Americans, a number of HIV/AIDS preventive interventions have been
implemented. Consistent with the knowledge that there are gender and cultural differences in HIV/AIDS relevant behavior, HIV/AIDS preventive interventions that are gender- and culturally-specific appear to be most effective (e.g., Sisters Informing Sisters about Topics on AIDS) (DiClemente & Wingood, 1995). A meta-analysis conducted by Mize et al. (2002) examined several HIV/AIDS preventive intervention strategies among young women in different ethnic categories. The following strategies were studied: reading literature (e.g., viewing a pamphlet); audiovisual material (e.g., playing a video game, watching an educational rap video); personal communication (e.g., an encounter with an educator); and multiple-session knowledge and skill-building group meetings. Knowledge, self-efficacy, and behavior were evaluated. Results suggested that across ethnicities, interventions most effectively influenced women’s knowledge and behavior. Self-efficacy findings were less consistent across ethnicities with significant improvements in feelings of self-efficacy for African-American women only seen six months or longer after the intervention. Mize et al. (2002) suggest that the initial insecurity of African-Americans about their own ability to ensure safer sex behaviors is related to the sex-ratio imbalance (i.e. more women than men) in the African-American community. Research suggests that due to perceived mate shortages African-American women may initially fear losing their relationship to the extent that they will not assert themselves and demand safe sex practices (Airhihenbuwa, Diclemente, & Wingood, 1992; Kline, Kline, & Oken, 1992; Mays & Cochran, 1988). Mize et al. (2002) suggest that perhaps once African-American women saw that they were actually able to make behavioral changes, self-efficacy subsequently increased at the 6-month follow-up. O’Leary, Jemmott and Jemmott (2008) also assert the importance of self-efficacy as a mediator of effective preventive interventions.

Wilson and Miller (2003) also examined the effectiveness of the following three types of culturally-specific HIV/AIDS preventive interventions: a) those that reflect the look and sound of the target population; b) those that employ central information cues in the presentation (e.g., interventions which employ culturally-specific statistics); and c) those that employ both peripheral and central information cues (Wilson & Miller, 2003). Findings were that implementing culture into the central content of the interventions (compared to the peripheral content of the interventions) may be of greater importance to the effectiveness of messages. Essentially, health educators and researchers are proposing that educational efforts among high-risk groups of color must adhere to and incorporate salient themes from the culture in which the research is targeted.

Theater as an Educational Tool

Theater is an art form that has been used for centuries to entertain, inspire, and educate its audiences and shed light on a plethora of issues that impact the lives of everyday people (Stephens-Hernandez et al., 2007). The combination of using theatre as a tool to educate and promote social change allows for information to be shared and attitudes and behaviors to be demonstrated on a larger scale without intimidation that other, more traditional, methods may evoke. The use of drama-based productions to highlight health issues in minority populations has been well-documented and supported by health and social science fields such as biology and psychology (Smith et al., 2010; Cameron et al., 2012; Stephens-Hernandez, 2007; Livingston et al., 2009). In a study by Smith et al. (2010), theatre was used to educate African Americans about HIV/AIDS. Participants in this study exhibited an increased knowledge and expressed intended likelihood of engaging in healthier behavior. Cameron et al. (2012) found theater to be an effective tool in educating African American men about prostate cancer. The men in the study reported increased knowledge about symptomology and methods for testing and screening.
Given the utility of theater in educating communities of color about other health disparities (i.e. prostate cancer and breast cancer), theater may be an effective tool in addressing sexually transmitted diseases among young African American women. Therefore, the purpose of the current paper is to assess the utility of theater in educating young African American women about HIV/AIDS. The current study will seek to elucidate whether theater is an effective tool in increasing knowledge and awareness about HIV/AIDS in young African American women. Furthermore, the study will seek to assess whether or not theater will increase the likelihood of young African American women engaging in pro-social health related behaviors and safe sex practices.

METHODS

Description of the Play

The current play was held at a Historically Black College (HBCU) in a mid-sized city in the Southeast during the summer of 2007. Actors from the University’s theater department and broader community were all allowed to audition for the play. The play lasted for approximately an hour and forty minutes with a brief intermission. In an effort to assess the impact of theater in increasing condom use, knowledge, and the intention to engage in healthy sexual decision-making within the African-American community, researchers at a HBCU, members of the theater faculty, and a program evaluation specialist convened to develop a play, *Lonely Words*, with the help of a local playwright from central North Carolina. The play takes place in an urban setting and is centered on a relationship between a young drug dealer, Rutherford, and his wife, Denise. Rutherford has just returned home from prison and secures a job at a local carwash where he works with a young man, Kevin, who aspires to be a drug dealer himself and envies all of the high profile drug dealers in the community. Old School, one of the workers at the carwash, is an older, African-American, ex-felon who tries to provide wisdom and guidance about life and relationships to Rutherford and Kevin. Once Rutherford’s wife is diagnosed with HIV/AIDS, the main plot in the story begins to unfold. Denise’s mother demands that Rutherford leaves the house, and he is faced with the realities of working in the streets and having to tell his wife what happened in prison. As tensions between Rutherford and Denise’s family continue to escalate, Old School, Rutherford’s newfound street mentor, helps him negotiate being homeless and consoles him about relationships and marriage. Once Rutherford is tested and finds out that he is not HIV positive, he confronts his wife, and now Denise has to deal with the realities of a pregnancy and her infidelity while Rutherford was in prison. The play ends with both Denise and Rutherford facing their fears of a new child, HIV/AIDS, and preparing to live their lives together.

Design and Instrument

To gather data on participants’ knowledge and pro-social behavior regarding HIV/AIDS, surveys using retrospective pre-/post-test designs were employed. Retrospective pre-post design is a technique that is effective in gathering pre-prevention data when working with participants from the community (Koekkoek, B. et al., 2009). This design allows researchers to administer a survey or questionnaire at one time to participants rather than before the intervention and after (Colosi & Dunifon, 2006). Gathering pre-intervention data immediately after an intervention more accurately measures a participant's understanding of a concept at one time rather than having to face the possibility that their understanding of the target concept has changed; and possibly invalidating the intervention results. This design has been shown to be effective in determining intervention effects and quite useful in community settings (Sprangers, &
Dramatic Plays As A Tool To Educate Young African American Females About HIV/AIDS
Livingston et al.

Hoogstraten, 1988). Consistent with traditional pre-/post-test design, researchers asked participants to indicate their level of knowledge regarding HIV/AIDS, their intention to use information to alter personal risk behavior and to become involved in efforts to reduce HIV/AIDS in the community before and after they play.

Procedures
To secure participants for the play, local health organizations and campus organizations convened to create a strategy that encouraged young people to attend the play. Free materials on safe sex practices were provided at each play. A well-known HIV/AIDS advocacy and education organization on campus assembled to provide educational resources to young people. Given the demographics and the unique ways in which this age group receives information, an aggressive advertising and marketing campaign was employed (Vaughan, Rogers, Singhal, and Swalehe, 2000). Researchers and students passed out flyers at nightclubs, bars, restaurants, and community events, and made use of distribution through social networking (e.g. MySpace and Facebook). Radio, television, newspaper, billboards, and posters were also utilized. Flyers and posters were mailed and distributed to churches, barbershops, and community centers in the area. To encourage participation among a younger demographic of individuals, media images of young urban contemporary couples were used on flyers, posters, and emails. All advertisements indicated that the play, Lonely Words, was a play about relationships and HIV/AIDS in the African American community. Advertisements also indicated that the play was free of charge and would run for twelve nights during the months of July and October of 2007.

At the close of the play, audience members were instructed to remain seated if they wanted to complete the questionnaire. Prior to administering the measures, researchers provided participants with a consent form and contact information on where to get tested and locations of community resources if they were infected. Participants were also informed that all responses were confidential and the data would only be handled by the research team. Research participants were also informed that their participation enabled them to be placed in a drawing to win one of two $25 gift cards. After the play, the participants completed the survey. Participants were also provided with an after-play panel discussion, where they were given the opportunity to ask questions of health care professionals, health educators, and HIV/AIDS survivors. The moderator instructed audience members and participants that after the collection of the data they could remain seated and hear from the panelist. Approximately 85% of the audience and research participants remained seated to hear from the panelists.

Measures
Demographics and risk behaviors
In addition to income and education status, women in the study were asked a series of questions to assess their health and risk behaviors (Table 1). Participants were asked whether or not they used condoms, the number of sexual partners within the past year, the number of times having unprotected sex during the past year, and whether or not they have had sex while intoxicated. To assess their insurance and health status, participants were asked if they had health insurance, the frequency of doctor visits, and their general health rating.

Knowledge, awareness, and intention to change behavior
In order to assess knowledge, awareness, and intention to change behavior, a modified version of the AIDS Risk Behavior Knowledge Test developed by Kelly, Lawrence, Hood & Brasfield (1989) was employed. The measure was revised, and consisted of 13 items assessing participant knowledge of basic HIV/AIDS information, misconceptions, sexual transmission, preventive behavior, and risks. A Likert Scale ranging from 1=disagree to 5=strongly agree was
employed. Examples of items include the following: “Before seeing the play, I believed that a person could not be exposed to the AIDS virus in one sexual contact.” & “After seeing the play, I believe that a person can be exposed to the AIDS virus in one sexual contact.” The split-half reliability coefficients were reported as .53 (Part 1) and .46 (Part 2). To assess changes in knowledge and behavior paired sample t-tests were performed on 7 items for knowledge and 6 items for behavior. Alphas for the present study were .68 and .65 respectively. Each of the scales was summed.

Analysis
SPSS was used to analyze the data; 20% of the data was randomly re-entered to assure that the data was entered accurately. Frequencies and distributions were conducted to assure that the data fell within acceptable ranges.

Participants
Audience members for the play were recruited from three counties in central North Carolina. Over 1,500 people attended the play over a four-week period. Selection criteria for the current study were that participants had to be female, African American, between the ages of eighteen and thirty-nine, and willing to participate in the study. Of the playgoers, 219 women between the ages of 18 and 39 elected to participate in the study. Seventy four males were present but did not meet the criteria for the current study.

RESULTS
From this sample, 53.6% were between the ages of 18 and 25. Forty-two percent of the participants reported a household income between $30,001 and $50,000. Forty-two percent of the participants reported having some college education and 20.5% reported being college graduates. While 76% of participants reported using condoms, 49% of participants in this high-risk group reported engaging in unprotected sex more than four times during the past year. When asked about having sex while intoxicated, 23.8% of participants answered "yes". Approximately 68.2% of participants had been tested for HIV and 26% of participants reported having a family member who had been diagnosed with HIV. (See Table 1)

Knowledge regarding HIV/AIDS
Paired sample t-tests were conducted to investigate mean differences in responses for each of the items on both the knowledge and intended behavior scale (Table 2). Results of the analysis indicate there is a significant decrease in knowledge about appearance of those who are infected and a significant increase in knowledge regarding whether one can contract the HIV virus from sexual encounters ($M_1=-.170, SD=.83$), $t(215)=2.97, p<.01$; ($M_2=-2.43, SD=1.98$), $t(211)=-17.78, p<.01$, respectively. Participants reported significant increases in knowledge regarding heterosexuals’ risk for HIV/AIDS transmission ($M_1=-.170, SD=.78$), $t(205)=-2.16, p<.05$, respectively. Also, participants recorded statically significant increases regarding knowledge of false positive results amongst individuals that are tested ($M_1=-.23, SD=1.19$), $t(201)=-2.72, p<.01$ (See Table 2).

Intended Behaviors
Results of the study indicate there are statistically significant mean differences in participants' intentions to become involved in community efforts to educate people about HIV/AIDS ($M_1=-.215, SD=.762$), $t(205)=-.403, p<.01$ and intentions to discuss sexual pasts with their current sexual partners ($M_1=-.607, SD=1.19$), $t(191)=-7.05, p<.01$ (See Table 2). Moreover, participants in the study indicated significantly greater intention to use condoms and
decreased fear of getting tested for HIV/AIDS following viewing the play (M = -.645, SD = 1.31), t (182) = -6.73, p < .01 and (M = .240, SD = 1.10), t (205) = 3.12, p < .01 respectively (See Table 2).

**DISCUSSION**

Given the disproportionate rates of HIV/AIDS among young African American women, there is a need to develop more innovated community-based educational interventions. The current study attempted to assess the effectiveness of theater in educating African American women about HIV/AIDS. Theater was shown to be effective in educating young African American women about HIV/AIDS. After viewing the play, participants indicated that they learned that one exposure could lead to HIV/AIDS. Moreover, young African-American females reported an increase in knowledge regarding whether or not African American heterosexuals are at risk for HIV/AIDS. These findings are consistent with the work of Livingston et al. (2009) who found that theater was effective in increasing knowledge about cancer among African Americans. In regards to sexual behavior, young African-American females reported an increased intention to discuss past sexual experiences with their sexual partners. They also reported an increased likelihood to use condoms and decreased fear of getting tested following the viewing of the play. Additionally, after viewing the play, participants also indicated that they planned to talk to family and friends and become involved in efforts to educate people in their community about HIV/AIDS.

After twelve performances, which were shown in the summer and fall, the play proved quite effective in stimulating dialogue on HIV/AIDS among audience members and participants. Just under 50% of the women reported having had unprotected sex at least four times in the past year. In regards to these findings, we did not collect data on whether the young women had multiple sexual partners or were in a committed relationship, which is a limitation to this study. Post play community forums provided young African-American females more opportunities to discuss barriers to getting tested (i.e. poverty, gender ratio imbalance, access to knowledge) and the clarity of HIV test results.

**CONCLUSION**

The intersection of race, class, and gender creates a need to understand the structural or ecological factors that may contribute to higher rates of HIV/AIDS among African-American women. Future studies should explore the role of health care, education, and economic factors in addressing racial disparities in HIV/AIDS and other health conditions. However, empowering African-American women educationally and economically is critical since disempowerment may represent a barrier to addressing risk behaviors in this population (Wingood & DiClemente, 2000). Future work exploring the use of plays to improve health protective behaviors and strategies, such as reducing the number of sexual partners and having discussions about sexual expectations, condom use, and sexual pasts will greatly aid in reducing HIV/AIDS risk.

**REFERENCES**


8 Dramatic Plays As A Tool To Educate Young African American Females About HIV/AIDS
Livingston et al.

Cameron, A. W. (2012). Fourth and a Mile: Using Theater in Comparison to Workshop/Lecture as an Approach to Educating African American Men About Prostate Cancer. *World Medical and Health Policy, 47*-64.


9 Dramatic Plays As A Tool To Educate Young African American Females About HIV/AIDS
Livingston et al.


