CULTURALLY SENSITIVE AND COMMUNITY-BASED HIV/AIDS PREVENTION MESSAGES FOR AFRICAN AMERICAN WOMEN

by

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Abstract

African American women account for almost two thirds of all women living with HIV/AIDS in the United States. These epidemiological data highlight a critical need to develop intervention campaigns that communicate risk reduction strategies to this population. Using the framework of the Information-Motivation-Behavioral skills (IMB) model, the current study recruited African American women to view one of four brochures in which two experimental treatments were crossed: African American/individual prevention; Caucasian/individual prevention; African American/community prevention and Caucasian/community prevention. Attitude toward the message, risk perception, self-efficacy and community responsibility were measured through a survey questionnaire. Results showed that participants who viewed brochures featuring African American women displayed more favorable attitudes, increased self-efficacy, increased community responsibility and increased perceived risk for other African American women. The limitations of this study and implications for future research and development of HIV/AIDS prevention strategies are discussed.

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Acknowledgments

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Chapter 1 - Problem Statement

In the United States, the Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) epidemic is a health crisis for African Americans. At all stages of HIV/AIDS - from infection to death - African Americans are disproportionately affected compared with members of other racial and ethnic groups.

The impact of HIV/AIDS on the African American community is heightened with respect to women, with Black women accounting for almost two thirds of all women living with HIV/AIDS in the United States.

These epidemiological data highlight a critical need to develop intervention campaigns that communicate realistic risk reduction strategies to this population. However, to be successful, such campaigns must traverse complex and intertwined risk factors, including cultural beliefs, sexual barriers and socioeconomic issues.

The purpose of this research was to examine the impact of culturally sensitive and community-based HIV/AIDS prevention messages on (1) attitude toward the message; (2) risk perception; (3) self-efficacy; and (4) community responsibility. The Information Motivation Behavioral Skills (IMBS) model of HIV prevention was used as a comprehensive framework to explain how information (through a brochure providing knowledge about HIV transmission and prevention) and motivation (through culture and community) may act synergistically to affect attitude, perceived risk and behavioral intentions.

The findings of this study may contribute to the development of health communication messages that positively impact minority women.

This thesis includes a literature review of (1) HIV/AIDS in African American Women; (2) Designing HIV/AIDS Prevention Messages for African American Women; (3) ecological health promotion strategies; and (4) the theoretical framework. The literature review is followed by hypotheses, a description of the methodology, results and a discussion of the findings, implications and limitations.

Chapter 2 - Literature Review

HIV/AIDS in African American Women

Among all racial and ethnic groups in the United States, African Americans suffer disproportionately high infection rates with HIV/AIDS. According to the Centers for Disease Control and Prevention (CDC), while African Americans represent only 13 percent of the U.S. population, about half (49 percent) of all people diagnosed with HIV/AIDS in 2005 were Black (CDC, 2005).

The problem is heightened with respect to African American women. In 2005, Black women constituted 64 percent of women living with HIV/AIDS, compared to 19 percent Whites and 15 percent Latinas (CDC, 2005). Furthermore, HIV/AIDS has been the leading cause of death among African American women aged 25-34 years for more than a decade (Anderson & Smith, 2003).

Early in the AIDS epidemic, most Black women contracted HIV infection through injection drug use, sex work, or contaminated blood transfusions. More recently, heterosexual transmission through unprotected sex with an infected partner has become the most prevalent route of infection, with 78 percent of new cases occurring this way (CDC, 2006).

HIV transmission through heterosexual contact may occur through intercourse with an infected partner, with a bisexual man or with an injection drug user. Consistent and correct condom use is the most effective way of preventing heterosexual transmission of HIV for sexually active women who are not in mutually faithful relationships with uninfected partners (Trussel, Sturgen, Strickler, & Dominik, 1994). Despite this highly

effective barrier to infection, condom use among African American women remains relatively low (Jemmott & Jemmott, 1991; Kelly, Murphy, Washington, Wilson, Koob, *et al.,* 1994).

Several interrelated factors may contribute to this pattern and these are discussed below. First, African American women are at greater risk of contracting HIV/AIDS due to higher infection rates among racial and ethnic minorities in the United States. In 1999, nearly one in four Blacks were living below the federal poverty line (U.S. Census Bureau, 1999) and greater concentrations of HIV/AIDS have been correlated with low socioeconomic status (Whetten-Goldstein, Nguyen, & Heald, 2001). Multiple barriers associated with poverty, such as educational deficiencies, transportation problems, childcare difficulties, little or no health insurance, lack of employment opportunities and lack of safe housing may directly or indirectly increase the risk factors for HIV infection as well as the likelihood of seeking counseling.

Second, lower knowledge about HIV/AIDS has been reported in minority adolescents and adults, suggesting the need for more effective educational initiatives (Kalichman, Hunter, & Kelly, 1992). However, knowledge about HIV/AIDS has not been shown to result in behavior change by itself (Goodman & Cohall, 1989; Hingson, Strunin, & Berlin, 1990) and similar to other populations, knowledge alone does not increase the probability that African American women will adopt safe sex practices (Davis, Sloan, MacMaster, & Kilbourne, 2007; Winfield & Whaley, 2002).

Third, there is some evidence that African American women do not perceive themselves to be at risk from HIV/AIDS. Stigma, fear and denial have been well documented as key barriers to HIV/AIDS prevention, and many African American

women continue to view HIV/AIDS as an infliction of White gay men or homosexuals (Mays & Cochran, 1988; Prochaska, Albrecht, Levy, Sugrue, & Kim, 1990; Foster, 2007). Even with the recognition that HIV/AIDS can occur by heterosexual transmission routes, many African American women do not perceive themselves to be at risk in heterosexual relationships they believe to be long-term, committed, or exclusive (). Hobfoll, Jackson, Lavin, Britton and Shepherd (1993) surveyed single, pregnant African American women and found that less than 10 percent used condoms consistently and most reported being in 'monogamous' relationships. However, upon further analysis, this translated to a pattern of 'serial monogamy,' with women feeling protected from risk by virtue of having only one partner at a time (Hobfoll *et al.,* 1993).

Finally, social and cultural issues, including sexual oppression among African American women may constitute barriers to reducing the risk for HIV/AIDS. Research on women's attitudes toward condom use suggests that many African American women appraise condoms negatively; viewing them as unromantic, lacking in spontaneity, and detracting from sexual pleasure (Hinkle, Johnson, Gilbert, Jackson, & Lollis*,* 1992; Kline. Kline, & Oken, 1992). Condoms also are viewed negatively within the African American community because of their association with casual relationships, infidelity, disease, and because of beliefs that they detract from trust, intimacy, and commitment (Sobo, 1993; Weeks, Schensul, Williams, Singer, & Grier, 1995). Male dominance in relationships may also cause many African American women to perceive that they have little control over the sexual behavior of their partners and limited opportunity to establish the need for condoms (Weeks *et al.,* 1995). In a recent study, Jones and Oliver (2007) explored the reasons why minority women engaged in unprotected sex with male

partners they distrusted and perceived to practice high risk behaviors. The results indicated that the salient risks of unprotected sex were buried under an awareness of one's obligation to satisfy a man and accept cheating. Raiford, Wingood and DiClemente, (2007) studied 366 HIV-positive African American women in the southeastern United States and showed a correlation between consistent condom use and a woman's self-efficacy to communicate with her partner and her perception of personal and partner-related barriers to condom use.

The reduced efficacy in Black women's ability to assert themselves with respect to their heterosexual interactions may result in part from a lack of sound advice from female relatives. Close relatives, particularly mothers, play an important role in adolescent's sexual socialization (Fasula, Miller, & Wiener, 2007) and mother-daughter sexual discussions have positive effects on reducing sexual risks (Fasula *et al.,* 2007). However, although mothers are more comfortable in talking to daughters than sons, they may inadvertently reinforce sexual habits that may limit sexual awareness and increase risky behaviors (Fasula e*t al.,* 2007). DiIorio, Hockenberry-Eaton, Maibach, Rivero and Miller (1999) studied sexual discussions between African American mothers and adolescents and found that topics discussed emphasized sexually-transmitted disease, HIV/AIDS and condom use for sons and relied more heavily on normal development and abstinence for daughters. Similarly, Levin and Robertson (2002) found that ethnic minority mothers were more accepting of sons carrying condoms, even when mothers believed their daughter to be sexually active.

The trends described above highlight a critical need to develop effective intervention strategies that address Black women's risk of contracting HIV/AIDS through

heterosexual interactions. Numerous educational programs, mass media campaigns and community-based interventions have been developed, but relatively little scholarly attention has been devoted to determining precisely why these messages are not reaching - or are not effective - in promoting behavioral changes in this population.

Designing HIV/AIDS Prevention Messages for African American Women

Since HIV/AIDS was declared as an epidemic, the mass media have been the main source of information about the disease to the general public (Myre & Flora, 2000; Brossard & Shanahan, 2006). However, an increasing number of studies have attributed the failure of current HIV/AIDS communication strategies to a lack of consideration for the cultural context (Airhihenbuwa, 1995; Airhihenbuwa, Makinwa, & Obregon, 2000; Dutta-Bergman, 2005, Johnny & Mitchell, 2006; Rogers, 1995; 2000; Tufte, 2005).

The important role of culture in health promotion and disease prevention has become a key focus in health communication research in the current decade (Dutta-Bergman, 2004; 2005; Rogers, 2000; Melkote, Muppidi, & Goswami, 2000; Kar & Alcalay, 2000) where culture is viewed as a crucial determinant in behavior and attitude formation (Rogers, 2000). Misconceptions of risk for HIV infection among African-American women appear to have resulted, at least in part, from a lack of identification with popular images of HIV/AIDS risk groups, although few studies have tested this empirically (Herek, Gillis, Glunt, Lewis, Welton, *et al.,* 1998; Kalichman, Kelly, Hunter, Murphy, & Tyler, 1993; Stevenson & Davis, 1994). Kalichman *et al.,* (1993) measured HIV/AIDS risk sensitization in African American women and found that those who

viewed a tape presented by African American women displayed increased fear, anxiety and concern compared to those who viewed a standard public health tape. The same women were also more likely to report that they had talked with friends about AIDS and request condoms at a follow up session (Kalichman *et al.,* 1993). Furthermore, the study demonstrated an increased benefit of delivering the prevention messages in a culturally-relevant context, although significant changes were still not observed in most items relating to AIDS-related knowledge, attitudes or behaviors (Kalichman e*t al.* 1993).

Herek *et al.* (1998) designed culturally sensitive educational materials for African American audiences and demonstrated that culturally specific messages delivered by a culturally matched presenter were rated more credibly and favorably than multicultural messages delivered by a White announcer. In line with Kalichman's 1993 study, Herek *et al.* were unable to show significant changes in attitude and behavior, noting that it may be unrealistic to expect an evaluation beyond the superficial in a short video (Herek *et al.*, 1998). This group did, however, state that influencing the credibility and attractiveness of a message is likely necessary, if not sufficient, for effecting long-term changes in AIDS-related attitudes, beliefs and behaviors (Herek *et al.,* 1998).

These studies and others support the general conclusion that HIV/AIDS messages are most effective when they include images and content that resonate with the cultural background of their target audience. However, the precise nature of the cultural content necessary to make HIV/AIDS prevention materials more credible and more attractive still remains unclear.

Apart from presenter race, there are several ways to achieve cultural sensitivity that incorporate the cultural identity (through language, body language, presenter attire

and scenery) and the community experiences of the target audience. Kalichman *et al.* (1993) created videotapes that included several themes previously determined to be relevant to African American women, including cultural pride, community concern and family responsibility (Mays and Cochran, 1988). However, since this study manipulated several variables simultaneously and the tapes differed in terms of presentation, verbal and graphic material, and informational content, this study was unable to identify which factor(s) were most effective in increasing AIDS-related risk reduction (Kalichman *et al.,* 1993).

Similarly, Herek *et al.* (1998) manipulated the cultural content of videotaped messages, appealing to the viewer's ethnic and community identity by placing African American art in the background and by adding a traditional African hat and necklace to the narrator. Again the specific factor(s) responsible for the attitudinal changes were not determined in this study.

A single component of the cultural content of HIV/AIDS messages that has not been evaluated in conjunction with presenter ethnicity is the power of the community. For African Americans, the ethnically based values of cooperation, community pride and unity may be more powerful motivators of change than appeals to individualistic action, such as protecting oneself (Mays & Cochran, 1988). Furthermore, so-called 'ecological' approaches are becoming increasingly popular in health communication. In fact, the Institute of Medicine recently endorsed this broad approach to public health interventions, recommending the adoption of "an ecological model for viewing public health problems, where the individual is viewed within a larger context of family, community, and society" (IOM, 2002).

Ecological Health Promotion Strategies

Ecological health promotion strategies encompass many approaches that share an emphasis on community mobilization and environmental action as well as individual behavior change (Green, Richard, & Potvin, 1996; Melkote *et al.*, 2000). The most prominent idea is that of empowerment, where groups and individual community members come together to achieve greater influence over community actions and gain greater control of their lives. By considering the individual as well as the social-environmental context, these health promotion strategies strive to produce interventions that are comprehensive, addressing the multiple factors that influence the health problem (Green *et al.,* 1996; Melkote *et al.,* 2000).

Ecological approaches toward community mobilization have been used successfully in diverse health promotion and intervention campaigns including heart and lung disease (Bourdages, Sauvageau, & Lepage*,* 2003), gang problems (Spergel & Grossman, 1997), alcohol prevention (Treno, Gruenewald, Lee, & Remer, 2007), and malaria (Panter-Brick, Clarke, Lomas, Pinder, & Lindsay, 2006).

Although the potential benefit of community mobilization strategies in HIV/AIDS prevention campaigns has long been recognized (Hobfoll, 1998; Person & Cotton, 1996), few studies have reported on the use of ecological HIV/AIDS prevention campaigns, and those documented are prevention trials refereed by overall campaign success and not the effectiveness of the message components. Furthermore, the combined effect of culturally sensitive and community based messages on attitude toward the message, risk perception, self-efficacy and community responsibility has not been tested experimentally.

Theoretical Framework

Numerous theories and models have been developed that aim to describe health-related behavior and predict behavioral change. For example, the Health Belief Model (Becker, 1974), the Theory of Reasoned Action (Fishbein and Ajzen, 1975), Social Cognitive Theory (Bandura, 1986), the Theory of Planned Behavior (Ajzen, 1991), the AIDS Risk Reduction Model (Catania, Kegeles, & Coates, 1990) and the Information-Motivation-Behavioral skills model (IMB; Fisher & Fisher, 1992; 2000) have all been used to identify cognitive, skill-related environmental and social factors that contribute to an individual's health protective behavior. Many of these theories have been applied to the conceptualization of HIV-related risk behaviors and thus lay the groundwork for selecting and examining factors that may be used to promote prevention.

The Information-Motivation-Behavioral skills (IMB) model of HIV preventive behavior was chosen as the framework for this study because it was developed specifically to address HIV/AIDS prevention and uses a holistic approach to examine HIV-related risk behaviors (Fisher & Fisher, 1992; 2000). Derived from existing literature about HIV/AIDS risk reduction and incorporating several constructs from existing models, the IMB considers the knowledge, motivation and self-efficacy necessary for HIV prevention as well as the relationships between these factors.

The IMB model postulates that HIV preventive behavior is determined by behavioral skills developed through prevention information and motivation. According to the IMB model, information that is relevant to HIV transmission and easy to apply in an individual's social setting is the first step towards HIV/AIDS prevention. This information includes facts about HIV/AIDS transmission and prevention, and is regarded

as critical, given that individuals need to know the ways in which HIV can be transmitted and how it can be prevented. Information may also be necessary to correct misperceptions about HIV/AIDS. However, as noted by Perloff (2001), information alone is viewed as necessary, but not sufficient, to enact behavioral changes.

The second step in the model is motivation to engage in HIV/AIDS preventive behavior. Motivation influences whether or not well-informed individuals will be roused to use the information provided to protect themselves. The motivation component of the IMB model is an extension of Fishbein and Ajzen's (1975) theory of reasoned action, and includes both personal and social motivation. Personal motivation is achieved through several factors including self-efficacy, risk perception and favorable attitudes toward performing HIV preventive acts. Self-efficacy can be defined using Bandura's (1977) construct: 'an individual's belief in his or her capacity to engage in behaviors (such as condom usage) necessary to attain specific goals (such as HIV/AIDS prevention).' Risk perception – defined as the likelihood that an individual is already infected with HIV or will eventually become infected - is a key determinant in the theory of reasoned action (Fishbein & Ajzen, 1975). The argument is that people use condoms (or have only one partner or practice sexual abstinence) only if they think the costs of the potential illness outweigh the costs of buying condoms and of overcoming the reluctance to wear a condom. Despite the recognition that risk perception can be modulated by emotional beliefs (such as self-efficacy), many models of risk perception are based on individuals' capacities to determine risk in a rational, logical manner. However, several studies have reported very low perception of risk, even in relatively high prevalence situations. For example, in Ethiopia, Sahlu *et al*. (1993) found that only 17 percent of men and 2 percent

of women, despite high and correct knowledge of HIV transmission, acknowledged that they were at any risk of HIV. In addition to personal motivation, social motivation - or perceived social and community support for performing specific prevention acts – is believed to impact – either positively or negatively – individual preventive beliefs.

If information and motivation are delivered successfully, well-informed individuals will be capable of enacting HIV preventive behaviors. Behavioral skills include communicating with a partner about practicing safe sex, properly using a condom and displaying increased self-efficacy in performing these skills over an extended period of time.

The Current Study

African American women were identified as a population at high risk for HIV/AIDS. Previous research suggests that a lack of relevant information or a lack of motivation (caused by a deficit in consideration for the cultural context) may account for the continuance of risky behaviors in this population. Using the framework of the IMB, the current study explored how information (through a brochure providing knowledge about HIV transmission and prevention) and motivation (through cultural images and community involvement) affected attitude toward the message, perceived risk perception, perceived self efficacy and perceived community responsibility.

Previous HIV/AIDS prevention research has demonstrated that cultural images (e.g. through matching presenter ethnicity) have improved attitudes, risk perception and self-efficacy in African American women (Stevenson & Davis, 1994; Herek *et al.,* 1998; Kalichman *et al.,* 1993) and that community-based campaigns may improve HIV

prevention efforts (Hobfoll, 1998). The possible synergistic or antagonistic effects of cultural images and community-based messages on attitude, risk perception, self-efficacy and perceived community responsibility have not yet been examined experimentally.

Hypotheses

H1: Main Effect for Race:

H1a: Participants who view an HIV/AIDS brochure containing an image of an African American model(s) will display higher risk perception than participants who view the brochure containing an image of a white model(s).

H1b: Participants who view an HIV/AIDS brochure containing an image of an African American model(s) will display higher self-efficacy than participants who view the brochure containing an image of a white model(s).

H1c: Participants who view an HIV/AIDS brochure containing an image of an African American model(s) will have a more favorable attitude toward the brochure than participants who view the brochure containing an image of a white model(s).

H2: Main Effect for Theme:

H2: Participants who view an HIV/AIDS brochure emphasizing an ecological/community approach will display higher community responsibility than participants who view the brochure emphasizing an individual approach.

Research Question 1: Interaction Between Race and Theme:

The effect of an HIV/AIDS brochure featuring African American model(s) and a community approach on (1) attitude towards the message; (2) risk perception; (3) self-efficacy; and (4) community responsibility will be explored.

CHAPTER 3 - Methods

Participants

A total of 57 African American women from Manhattan, Kansas were recruited through community groups, churches and an online approach at a state university. A $5 per person incentive was offered as compensation for participation and interested women were randomly assigned to one of five experimental conditions. The ages of the respondents ranged from 18 to 76, with a mean of 35 years and a standard deviation of 16.2. More than half of the respondents (57.9 percent) reported never being married, with about 20 percent of respondents indicating they were married, 20 percent indicating they were divorced and 3.5 percent indicating they were widowed. In terms of education, the highest proportion (59.7 percent) had completed some college, while 10 percent reported completing college, and 20 percent reported completing graduate school or more. Household income ranged from less than $10,000 to greater than $100,000, with about 30 percent of respondents reporting a household income of less that $10,000 and 21 percent reporting between $20,0001 to $35,000. Finally, religiosity, measured on a scale of 1 (not at all religious) to 5 (very religious), gave a mean of 3.7, with a modal response (45.6 percent) of '4.'

Experimental Set-up

The brochure and survey were administered in one of two ways. The majority of respondents (74 percent) were provided with a hard copy of the brochure and completed a

pencil and paper survey. Participants were asked to view the brochure for two to three minutes and then asked to stop, seal it in an envelope and complete the questionnaire.

Due to limited responses using the paper and pencil format, the experiment was modified slightly to allow distribution as an online survey. Here, participants viewed the brochure as a timed PowerPoint slide show (two and a half minutes). The slide show ended with a link to an online version of the questionnaire. The online questionnaire was hosted by the K-State's Axio system, and the questions remained identical to those administered in the paper and pencil version. Since the PowerPoint presentation closed when the link to the online survey was accessed, it is unlikely that participants referred back to the brochure while completing the questionnaire. However, it cannot be completely ruled out that participants re-opened the PowerPoint slideshow for additional viewing time. An independent samples t-test was used to test for differences between the two groups in terms of the dependent variables. There were no significant differences in perceived risk perception, self efficacy and community responsibility. A significant difference was observed for attitude toward the brochure, with those viewing the print version rating the brochure more favorably than those viewing the online version ($t = 10.26$, $p=0.00$).

The Brochures

Participants were assigned randomly to one of five treatment groups. Group One and Group Two viewed an HIV prevention brochure entitled "HIV and AIDS. Are You at Risk?" Group Three and Group Four viewed a HIV prevention brochure entitled "HIV and AIDS. Are We at Risk?" The informational content of the brochures was based on

two existing publications: 1) the CDC brochure entitled "HIV and AIDS Are you at risk?" (available at http://www.cdc.gov/hiv/resources/brochures/pdf/at-risk.pdf) and 2) the U.S. FDA fact sheet "Women and HIV" (available at http://www.fda.gov/womens/getthefacts/hiv.html).

The brochure viewed by participants in Group One featured a young, White, female model. It discussed HIV and AIDS, its cause and prevention and provided a message prompting the participant to engage in self-protective measures.

The brochure viewed by participants in Group Two featured a young African American, female model. The copy in this version was identical to the Group One brochure. It discussed the AIDS epidemic, its cause and prevention and provided a message prompting the participant to engage in self-protective measures.

The brochure viewed by participants in Group Three featured a group of young White women. The factual information was the same as the brochures for Groups One and Two. It discussed the AIDS epidemic, and its cause and prevention. But instead of the prompt to engage in self-protective behaviors, it provided a message prompting the participant to engage in community prevention efforts.

The brochure viewed by participants in Group Four featured a group of young African American women. The copy in this version was identical to the one read by Group Three participants. Please refer to Appendix 1 for the brochures.

Group Five functioned as a control group. These participants did not view any stimulus material before completing the survey questionnaire.

The Survey Questionnaires

Immediately after viewing the brochures, participants were asked to complete a eight-part questionnaire designed to measure the following key variables: 1) Perceived risk; 2) Self-efficacy; 3) Perceived community responsibility; 4) Knowledge; 5) Demographics; and 6) Attitude toward the brochure.

Perceived risk was measured by three sections. First, four open-ended questions asked respondents to report the following in one or two sentences: "Do you think you are at risk for HIV/AIDS?" "How much do you worry that you might be at risk for HIV/AIDS?" "How much do you worry that members of your community might be at risk for HIV/AIDS?" and "What could you do to help stop the spread of HIV/AIDS in your community?"

For interval-level measures, Crohnbach's alpha was used to assess scale reliabilities and Principle Components Analysis was used to assess scale structures. The criteria for scale reliability was _ of 0.75 or greater, and for Principle Components Analysis was extraction of factors with Eigenvalues of greater than 1.0. The second perceived risk section was measured by five items (Burkholder, Harlow & Washkwich, 1999). The items ($\alpha = 0.79$) were: "I feel that I am at risk for getting HIV/AIDS at this time in my life," "I sometimes think that I have been exposed to HIV/AIDS," "I have had sex with someone who could have given me HIV/AIDS," "One of my close friends does things that could lead to them getting HIV/AIDS," and "If you were to make a guess, how sure are you that you are at risk of getting HIV/AIDS at this time in your life?" The items were based on a scale of 1 (not at all sure) to 5 (very sure). All five questions loaded on a single factor.

Third, perceived likelihood of contracting HIV/AIDS was asked by a question: "What are the chances that you will develop HIV/AIDS at some point in your life? Estimate the percentage out of 100. _____/100." Likelihoods for others were measured by the following questions: "What are the chances that the average American adult woman/American adult man/African American adult woman/African American adult man will develop HIV/AIDS at some point in their life?"

Perceived self efficacy was measured by six items. The initial reliability was low (α = 0.65) and observation suggested that many participants did not notice that item 19 ("I feel uncomfortable carrying condoms with me.") was reverse coded and thus this item was removed. The five remaining items (α = 0.82) were: "Condoms are easy to use," "Using condoms when having sex tells my partner I care about my health," I am able to buy condoms," I am able to make sure condoms are used with a sex partner," and "it is ok for women to carry condoms." The items were based on a scale of 1 (Strongly disagree) to 5 (Strongly agree). These five items also resulted in a single factor principal components solution.

Perceived community responsibility was measured using nine items (four of which were adapted from Peterson's "Brief Sense of Community Scale" (Peterson, Spear, & McMillan, 2008)). The items (α = 0.91) were: "I am willing to talk to my female relatives, like my daughter or sister, about HIV/AIDS," "I am willing to talk to my female relatives, like my daughter or sister, about using a condom," "I am able to make a difference in my community," "I am willing to work with others in my community to help reduce the spread of HIV/AIDS," "Community places (such as churches, health clinics, local governments) should work together to help reduce the spread of

HIV/AIDS," "I am willing to talk to people in power (such as pastors, mayor, health professionals) about ways to help reduce the spread of HIV/AIDS in my community," "I am willing to talk to my close friends and family about ways to help reduce the spread of HIV/AIDS in my community," "People in my community should speak up about HIV/AIDS," and "I would like more information about HIV/AIDS so that I can learn how to protect my community." The items were based on a scale of 1 (Strongly disagree) to 5 (Strongly agree). Principal Components analysis resulted in a single-factor solution.

Ethnic identity was measured using three items adapted from Phinney's (1992) "Multigroup Ethnic Identity Measure." The items were: "I have spent time trying to find out more about my ethnic group (its history, traditions and customs)," I am active in organizations that include mostly members of my own ethnic group," and "I feel a strong attachment to my own ethnic group." The items were based on a scale of 1 (Strongly disagree) to 5 (Strongly agree). Reliability for these items was low ($\alpha = 0.58$). Principal Components analysis resulted in a single-factor solution.

Attitude towards the brochure was measured by three items adapted from (Brunner, James and Hensel's (2001) attitude toward the ad scale and two items included to measure source reliability and trustworthiness. The items ($\alpha = 0.92$) were: "Overall, what is your impression of this brochure? (Disliked it very much/Liked it very much)," "To what degree did you feel positive about this brochure? (Not at all positive/Very positive)," "Overall, how well did you like this brochure? (Did not like it at all/Liked it very much)," "Overall, do you think the information in the brochure you viewed was: (Untrustworthy/Trustworthy)," and "Do you think the information in the brochure was

(Unreliable/Reliable).” These items were measure on a seven-point scale, and Principal Components analysis resulted in a single-factor solution

A manipulation check was performed through three questions designed to measure the respondent’s ability to recall the race of the model(s) in the brochure, the number of women focused in the images (individual vs. group), and the theme of the brochure (HIV and AIDS: Are You At Risk vs. HIV and AIDS: Are We At Risk).

The results of the manipulation check are shown in Table 1. Of those respondents who viewed the brochure, 92 percent correctly identified the race of the model, 87 percent correctly identified the number of women focused in the images and just over two-thirds were able to correctly identify the theme of the brochure (Table 1).

Table 3.1: Manipulation Check

	Race	Community/Individual Focus	Theme
N	47*	47*	47*
Correct	91.5	87.2	68.1
Incorrect	12.8	12.8	31.9

*Excludes respondents in Group 5

Please refer to Appendix 2 for the questionnaire administered to participants who viewed a brochure and Appendix 3 for the questionnaire administered to participants who did not view a brochure.

Statistical Analyses

All statistical analyses were performed using SPSS version 11. Univariate Analysis of Variance (ANOVA) was used to test main effect hypotheses and potential

interaction effects. One-way ANOVA was used to test for differences between those groups who viewed the stimulus materials and those who viewed the control.

CHAPTER 4 - Results

Descriptive Statistics

Table 4.1 shows descriptive statistics for all dependent variables. The risk perception scale was normally distributed with a mean of 1.91 and a standard deviation of 0.93. The self-efficacy scale had a mean of 4.64 and a standard deviation of 0.64. This scale was not normally distributed, displaying a skewness of –2.91 and a kurtosis value of 11.10. Conventional methods for data transformation (natural log, square root and $\log_{10}$ transformations) were not able to improve the distribution of this variable. The attitude toward the brochure scale showed normal distribution, with a mean of 4.52 and a standard deviation of 1.41. The community responsibility scale had a mean of 4.48 and a standard deviation of 0.67. This scale was not normally distributed, displaying a skewness value of –2.73 and a kurtosis value of 10.77. As with the self-efficacy scale, transformations did not improve the distribution (see Table 4.1). For both the self-efficacy and the community responsibility scales, then, the original variables were used in the hypothesis tests even though their distributions were non-normal.

Table 4.1: Overall Descriptive Statistics for the Dependent Variables (N= 57).

	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
Risk Perception	1.00	5.00	1.91	0.93	1.40	0.32	1.93	0.62
Self Efficacy	1.40	5.00	4.64	0.64	-2.91	0.32	11.10	0.62
Attitude Toward Brochure	2.20	7.00	4.52	1.41	0.22	0.35	-1.17	0.68
Community Responsibility	1.11	5.00	4.48	0.67	-2.73	0.32	10.77	0.62

Table 4.2 shows descriptive statistics for dependent variables broken down by respondent group. There are no descriptive statistics for attitude toward the brochure in Group Five, since this control group did not view the brochure.

Table 4.2: Means and Standard Deviations of all Dependent Variables by Conditions (N= 57).

	African American Community		African American Individual		Caucasian Community		Caucasian Individual		Control (no brochure)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Risk Perception	2.00	0.83	1.98	1.36	1.78	0.70	1.83	1.00	2.05	0.81
Self-Efficacy	4.87	0.16	4.78	0.48	4.35	1.04	4.52	0.61	4.78	0.45
Attitude Toward Brochure*	5.07	1.26	5.00	1.36	3.58	1.16	4.48	1.47	N/A	
Community Responsibility	4.68	0.37	4.87	0.24	4.06	1.13	4.45	0.41	4.39	0.62

* Seven-point scale. All other variables measured on five-point scale.

Risk Perception

Univariate Analyses of Variance (ANOVA) were used to examine the effect of race (African American vs. Caucasian), theme (individual vs. community) and the interaction effect of race and theme on perceived risk. In terms of race, univariate ANOVA revealed no significant differences between the two groups ($F_{(3,45)} = 0.43$, p= 0.52, see Table 4.3). In terms of theme, univariate ANOVA revealed no significant differences between the two groups ($F_{(3,45)} = 0.00$, p= 0.97 , see Table 4.3). Finally, in terms of interaction, univariate ANOVA revealed no significant differences between the groups ($F_{(3,45)} = 0.01$, p= 0.91, see Table 4.3).

Table 4.3: Univariate ANOVA Analysis for Risk Perception

	Mean (SD)	**F-value**	**p-value**
Main Effect Race (N)			
African American (22)	1.99 (1.08)	0.43	0.52
Caucasian (27)	1.81 (0.86)		
Main Effect for Theme (N)			
Community (24)	1.89 (0.76)	0.00	0.97
Individual (25)	1.89 (1.13)		
Interaction (N)			
AA/Comm (12)	2.00 (0.83)	0.01	0.91
AA/Indiv (10)	1.98 (1.36)		
Cauc/Comm (12)	1.78 (0.70)		
Cauc/Indiv (15)	1.83 (1.00)		

In addition to the five-item risk perception scale, perceived risk was also measured by asking the respondents to report a percentage risk for themselves, the average American woman, the average American man, the average African American woman and the average African American man. Univariate ANOVA analysis revealed that respondents who viewed the brochures featuring African American model(s)

displayed significantly higher risk perception for the average African American woman ($F_{(3, 36)} = 4.53$, p= 0.04, see Table 4.4). There were no significant differences between the groups in terms of theme or interaction effects (see Table 4.4).

Table 4.4: Univariate ANOVA Analysis for Percent Perceived Risk for the Average African American Woman

	Mean (SD)	F-value	p-value
Main Effect Race (N)			
African American (17)	51.59 (20.62)	4.53	0.04*
Caucasian (23)	38.09 (17.92)		
Main Effect for Theme (N)			
Community (22)	47.59 (16.86)	0.25	0.62
Individual (18)	39.22 (22.99)		
Interaction (N)			
AA/Comm (12)	50.17 (17.77)	1.57	0.22
AA/Indiv (5)	55.00 (28.50)		
Cauc/Comm (10)	44.50 (16.06)		
Cauc/Indiv (13)	33.15 (18.28)		

* p-value = significant at the 0.05 level.

Self-Efficacy

Univariate Analyses of Variance (ANOVA) were used to examine the effect of race (African American vs. Caucasian), theme (individual vs. community) and the interaction effect of race and theme on self-efficacy. In terms of race, univariate ANOVA revealed significant differences between the two groups, with those who viewed the brochures featuring African American models(s) displaying significantly higher perceived self-efficacy than those who viewed the brochures featuring Caucasian model(s) ($F_{(3,45)} = 4.14$, p= 0.48, see Table 4.5). In terms of theme, univariate ANOVA revealed no significant differences between the two groups ($F_{(3,45)} = 0.05$, p= 0.82 , see

Table 4.5). Finally, in terms of interaction, univariate ANOVA revealed no significant differences between the groups ($F_{(3,45)} = 0.47$, p= 0.50, see Table 4.5).

Table 4.5: Univariate ANOVA Analysis for Self-Efficacy

	Mean (SD)	F-value	p-value
Main Effect Race (N)			
African American (22)	4.83 (0.34)	4.14	0.048*
Caucasian (27)	4.45 (0.82)		
Main Effect for Theme (N)			
Community (24)	4.61 (0.77)	0.05	0.82
Individual (25)	4.63 (0.57)		
Interaction (N)			
AA/Comm (12)	4.87 (0.16)	0.47	0.50
AA/Indiv (10)	4.78 (0.48)		
Cauc/Comm (12)	4.35 (1.04)		
Cauc/Indiv (15)	4.52 (0.61)		

* p-value = significant at the 0.05 level.

Community Responsibility

Univariate Analyses of Variance (ANOVA) were used to examine the effect of race (African American vs. Caucasian), theme (individual vs. community) and the interaction effect of race and theme on community responsibility. In terms of race, univariate ANOVA revealed significant differences between the two groups, with those who viewed the brochures featuring African American models(s) displaying significantly higher perceived community responsibility than those who viewed the brochures featuring Caucasian model(s) ($F_{(3,45)} = 7.83$, p= 0.01, see Table 4.6). In terms of theme, univariate ANOVA revealed no significant differences between the two groups ($F_{(3,45)} = 2.36$, p= 0.13 , see Table 4.6). Finally, in terms of interaction, univariate ANOVA

revealed no significant differences between the groups ($F_{(3,45)} = 0.31$, p= 0.58, see Table 4.6).

Table 4.6: Univariate ANOVA Analysis for Community Responsibility

	Mean (SD)	F-value	p-value
Main Effect Race (N)			
African American (22)	4.77 (0.32)	7.83	0.01
Caucasian (27)	4.28 (0.82)		
Main Effect for Theme (N)			
Community (24)	4.38 (0.88)	2.36	0.13
Individual (25)	4.62 (0.40)		
Interaction (N)			
AA/Comm (12)	4.69 (0.37)	0.31	0.58
AA/Indiv (10)	4.87 (0.24)		
Cauc/Comm (12)	4.06 (1.13)		
Cauc/Indiv (15)	4.45 (0.41)		

* p-value = significant at the 0.05 level, ** p-value = significant at the 0.01 level.

Attitude Toward the Brochure

Univariate Analyses of Variance (ANOVA) were used to examine the effect of race (African American vs. Caucasian), theme (individual vs. community) and the interaction effect of race and theme on attitude toward the brochure. In terms of race, univariate ANOVA revealed significant differences between the two groups, with those who viewed the brochures featuring African American models(s) displaying a significantly higher attitude toward the brochure than those who viewed the brochures featuring Caucasian model(s) ($F_{(3,43)} = 6.45$, p= 0.02, see Table 4.7). In terms of theme, univariate ANOVA revealed no significant differences between the two groups ($F_{(3,43)} = 1.11$, p= 0.30 , see Table 4.7). Finally, in terms of interaction, univariate ANOVA revealed no significant differences between the groups ($F_{(3,43)} = 1.49$, p= 0.23, see Table 4.7).

Table 4.7: Univariate ANOVA Analysis for Attitude Toward the Brochure

	Mean (SD)	F-value	p-value
Main Effect Race (N)			
African American (21)	5.04 (1.27)	6.45	0.02*
Caucasian (26)	4.10 (1.40)		
Main Effect for Theme (N)			
Community (23)	4.56 (1.41)	1.11	0.30
Individual (24)	4.68 (1.42)		
Interaction (N)			
AA/Comm (12)	5.07 (1.26)	1.49	0.23
AA/Indiv (9)	5.00 (1.36)		
Cauc/Comm (11)	3.58 (1.16)		
Cauc/Indiv (15)	4.48 (1.47)		

* p-value = significant at the 0.05 level.

Since a significant difference in attitude arose between respondents viewing the brochure in print or online, with those viewing the print version rating the brochure more favorably than those viewing the online version, it was appropriate to determine if this difference was responsible for the effect of race on respondents' attitudes toward the brochure. Independent samples *t*-tests revealed that this was not the case, with those viewing the brochures featuring African American model(s) displaying significantly higher positive attitudes both in print and online ($t = 2.58$, $p = 0.021$ for online and $t = 1.93$, $p = 0.032$ for print).

Control Group

One-way ANOVA showed no significant differences between the control group and treatment groups in terms of risk perception, self-efficacy and community responsibility (data not shown).

Discussion

This study was conducted to examine the effect of culturally-sensitive and community-based HIV/AIDS prevention messages targeted toward African American women on perceived risk perception, perceived self efficacy, perceived community responsibility and attitude toward the brochure. A series of four brochures were created and the dependent variables were assessed through a survey questionnaire.

Hypothesis 1: Main Effect for Race

We hypothesized that viewing a culturally sensitive (race-matched) brochure would increase perceived risk perception. Contrary to the hypothesis, we did not observe a significant difference between those respondents who viewed brochures featuring African American model(s) and those who viewed brochures featuring Caucasian model(s) in terms of perceived risk perception measured on a five-item scale (Table 4.3). However, in partial support of our hypothesis, Univariate ANOVA tests revealed that respondents who viewed the brochures featuring African American model(s) displayed significantly higher risk perception for the average African American woman. In contrast, there were no significant difference observed in perceived risk reported for "self," "the average American woman," "the average American man," and "the average African American man."

Since open ended questions pertaining to risk perception revealed that many respondents in all experimental groups (30 percent, see Appendix 4) reported being "not sexually active" or "abstinent" at the present time, it is perhaps not surprising that

exposure to a culturally sensitive brochure would not increase risk perception for self, but would instead increase risk perception for other African American women. Despite the high numbers of women in this study reporting that they are not sexually active, the reduced percentage perceived risk for self as opposed to others is a clear indication that women in the African American community still regard HIV/AIDS as an infliction of others.

We also hypothesized that respondents who viewed a culturally sensitive (race-matched) brochure would demonstrate increased perceived self-efficacy. In support of this hypothesis, univariate ANOVA revealed a significant difference between the two groups, with those viewing the brochures featuring African American model(s) displaying significantly higher perceived self efficacy than those viewing the non-culturally sensitive versions (see Table 4.5).

We also hypothesized that viewing a culturally sensitive (race-matched) brochure would have a positive impact on how the brochure was rated in terms of how well it was liked, as well as source trustworthiness and reliability. In support of this hypothesis, univariate ANOVA revealed a significant difference between the two groups, with those viewing the brochures featuring African American model(s) displaying significantly higher positive attitudes toward the brochure than those viewing the non-culturally sensitive versions (see Table 4.7). These findings add to the previous body of work suggesting that HIV/AIDS information is most effective when presented in a culturally-relevant context (e.g. Kalichman et al, 1993; Herek et al, 1998).

In addition to the stated hypotheses, culturally sensitive HIV/AIDS brochures also had a significant effect on perceived community responsibility, with those respondents

viewing the brochures featuring African American models displaying significantly higher perceived community responsibility (see Table 4.6). This is a particularly intriguing finding. Even though no main effects for the community versus individual factor in the brochure were evident in this study, the visual presence of African American models in the brochures by itself created a stronger connection among African American women and their sense of connectedness to the African American community.

These findings add support to the IMB skills model, which postulates that HIV preventive behavior is determined by behavioral skills developed through prevention information and motivation. In the current study, culturally sensitive (race-matched) brochures were shown to increase motivation through increased attitude toward the brochure, self-efficacy and community responsibility.

Despite the significant differences mentioned above, it should be noted that one-way ANOVA showed no significant differences between control group and treatment groups for any of the dependent variables, casting some doubt on the potential use of these findings developing more effective HIV/AIDS prevention campaigns. However, since the sample in this study is limited by size, and since the mean values for the control group tended to fall between those of the treatment groups (with those viewing the African American model(s) displaying the highest self-efficacy, community responsibility and risk perception and those viewing the Caucasian model(s) displaying the lowest self efficacy, community responsibility and risk perception) we believe significant differences between the control and treatment groups may be observed in a larger sample.

Hypothesis 2: Main Effect for Theme.

We hypothesized that exposure to a community-based brochure would increase perceived community responsibility. Contrary to our hypothesis, we did not observe a significant difference between those respondents who viewed the community-based HIV/AIDS prevention brochure and those who viewed the individual message (see Table 4.6). There are several possible explanations for the inability of the community-based HIV/AIDS messages used in this study to elicit increased perceived community responsibility in respondents. First, it is possible that the effects of the culturally sensitive (race-matched) brochures were strong enough to override the effect of the community-based messages. Second, since the percentage of respondents who were able to recall correctly the theme of the brochure was substantially lower than the percentage able to recall the race and number of model(s) featured in the brochures, it is possible that some of the more subtle community manipulations went unnoticed. Third, since the community response was skewed toward the positive (with an overall mean of 4.48 on a five-point scale) it is possible that subtle differences in perceived community responsibility between respondent groups may not have been measurable on this scale.

Research Question 1: Interaction Effects

Univariate ANOVA did not reveal any significant interaction effects between race and community in terms of perceived risk perception, self-efficacy, community responsibility or attitude toward the brochure. Again, this result may be a result of the less "visible" manipulation of the community-based approach. Although the race manipulation was clearly visible, the community-based massages relied on a group focus

and subtle language manipulations, which may have been less salient in respondents' minds after a single, short viewing period.

Limitations and Future Directions

The results of this study are limited by several factors. First and foremost was a lack of willing participants in the target group – African American women of child-bearing age. This may be in part due to the geographical location of the researchers. According to the U.S. Census Bureau, African Americans make up six percent of the total population in Kansas, compared to about 13 percent in the U.S. (U.S. Census Bureau, 2006), and this number is likely to be fewer in the central and less metropolitan areas of the state. The topic - HIV and AIDS - may also have reduced willingness to participate in the target group. An interesting observation made during the course of this study was the general reluctance of Pastors to address the important issue of HIV/AIDS in their churches through participation. The lack of participants meant that the sample was relatively small across all conditions, which may have led to reduced experimental power.

Second, a large percentage (about 33 percent) of the data were collected from a single church group after a two hour Sunday morning service. There are several concerns with this method of sampling, which were heightened by the relatively small total sample size: The church-attending sample were older, and many reported that they were 'not sexually active' or 'abstinent.' Furthermore, it is likely that gathering data directly after a sermon may capture respondent's feelings at a point in time when they are less judgmental and feel greater self-efficacy - not to mention feeling tired, rushed and chatty.

A third possible problem was the fact that, since finding willing participants was fairly arduous, those that agreed to commit their community groups to participate in the study tended to be exceptionally positive about the nature of this research. Although the researchers were grateful for 'warm welcomes', it seems probable that an enthused pastor or community leader may bias they results toward the positive, and may explain why the community responsibility and self-efficacy scales' skewed means appeared to have reached a "ceiling effect".

Finally, and on a more general note, it should be mentioned that a single, timed brochure to a health brochure under experimental conditions may not be sufficient to sway long-standing personality traits like self-efficacy, or modulate risk-perception which is likely affected by many external factors. However, as noted by Herek *et al.,* (1998) that influencing the credibility and attractiveness of a message is likely necessary, if not sufficient, for effecting long-term changes in AIDS-related attitudes, beliefs and behaviors.

The results of this study have several implications for future HIV/AIDS prevention efforts. HIV/AIDS information should be disseminated in a culturally-sensitive format in order to increase favorable attitudes to the materials as well as increase perceived self-efficacy, community responsibility and risk perception for others in the African American community. Future studies should investigate further the role of race-matched and community-based HIV/AIDS prevention materials on perceived community responsibility as a potential ecological tool to add to current HIV/AIDS prevention efforts.

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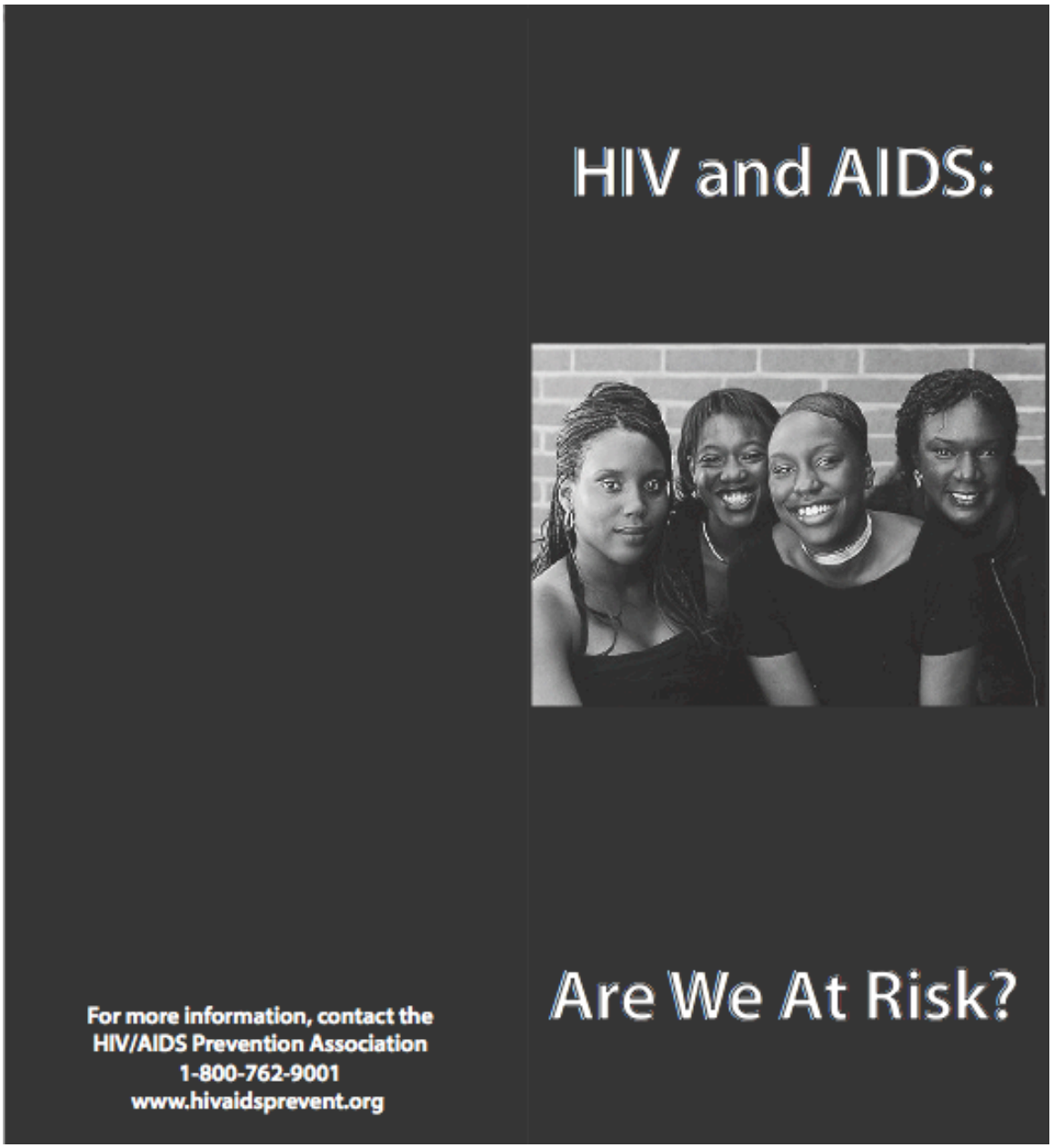
Appendix A – The Brochures



Are We At Risk?

Every 53 minutes, a woman in the U.S. is infected with HIV.

What do we need to know?

- *HIV stands for Human Immunodeficiency Virus.*
- *AIDS – Acquired Immunodeficiency Syndrome – is the disease we get when HIV destroys our body's immune system.*
- *When our immune system fails we can become very sick and die.*
- *Most women get HIV from having unprotected sex with men.*
- *Women from all backgrounds and cultures can get HIV.*

How can we protect our community?

1. Talk to the women in our life about carrying condoms.

2. Know where people in our community can go for testing and information.

3. Spread the word. Together we can fight HIV and AIDS.

HIV and AIDS:

Are We At Risk?

For more information, contact the
HIV/AIDS Prevention Association
1-800-762-9438
www.hivaidsprevent.org

Are We At Risk?

Every 53 minutes, a woman in the U.S. is infected with HIV.

What do we need to know?

- *HIV stands for Human Immunodeficiency Virus.*
- *AIDS – Acquired Immunodeficiency Syndrome – is the disease we get when HIV destroys our body's immune system.*
- *When our immune system fails we can become very sick and die.*
- *Most women get HIV from having unprotected sex with men.*
- *Women from all backgrounds and cultures can get HIV.*

How can we protect our community?

1. Talk to the women in our life about carrying condoms.

2. Know where people in our community can go for testing and information.

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- *Women from all backgrounds and cultures can get HIV.*

How can I protect myself?

1. Be prepared by always carrying condoms.

2. Find out where you can go for testing and information.

3. Know the facts. You can prevent HIV and AIDS.

HIV and AIDS:

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Are You At Risk?

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What do I need to know?

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- *When your immune system fails you can become very sick and die.*
- *Most women get HIV from having unprotected sex with men.*
- *Women from all backgrounds and cultures can get HIV.*

How can I protect myself?

1. Be prepared by always carrying condoms.

2. Find out where you can go for testing and information.

3. Know the facts. You can prevent HIV and AIDS.

Appendix B - Questionnaire (Those Who Viewed Brochure)

Dear Participant,
We are conducting this questionnaire to gain information about your feelings towards the brochure you just viewed. Your honest opinion is important in helping us to create better health education materials. You participation is voluntary, anonymous and your answers will be kept confidential.

1. In one or two sentences, please write down whether **you think** you are at risk for HIV/AIDS and explain why or why not._____
____
_____
_____
_____

2. In one or two sentences, please write down how much **you worry** that you might be at risk for HIV/AIDS._____
_____
_____
_____

3. In one or two sentences, please write down how much you **worry** that members of **your community** might be at risk for HIV/AIDS._____
_____
_____
_____

4. In one or two sentences, please describe what you think you could do to **help stop** the spread of HIV/AIDS in **your community**.
_____
_____
_____
_____

Next, after reading each statement, please tell us how you feel on a scale of 1 (Not at all sure) to 5 (Very sure).

5. I feel that I am at risk for getting HIV/AIDS at this time in my life.
   (1) (2) (3) (4) (5)

6. I sometimes think that I have been exposed to HIV/AIDS.
   (1) (2) (3) (4) (5)

7. I have had sex with someone who could have given me HIV/AIDS.
(1) (2) (3) (4) (5)

8. One of my close friends does things that could lead to them getting HIV/AIDS.
(1) (2) (3) (4) (5)

9. If you were to make a guess, how sure are you that you are at risk of getting HIV/AIDS at this time in your life?
(1) (2) (3) (4) (5)

Now, let's think about the chances of getting HIV/AIDS.

10. What are the chances that **you** will develop HIV/AIDS at some point in your life? Estimate the percentage out of 100. _____/100.

11. What are the chances that the average **American adult woman** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

12. What are the chances that the average **American adult man** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100. _____/100.

13. What are the chances that the average **African American adult woman** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

14. What are the chances that the average **African American adult man** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

Next, after reading each statement, please tell us how much you agree or disagree on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

15. Condoms are easy to use.
(1) (2) (3) (4) (5)

16. Using condoms when having sex tells my partner I care about my health.
(1) (2) (3) (4) (5)

17. I am able to buy condoms.
(1) (2) (3) (4) (5)

18. I am able to make sure a condom is used with a sex partner.
(1) (2) (3) (4) (5)

19. I feel uncomfortable carrying condoms with me.

(1) (2) (3) (4) (5)

20. It is ok for a woman to carry condoms.
(1) (2) (3) (4) (5)

21. I am willing to talk to my female relatives, like my daughter or sister, about HIV/AIDS.
(1) (2) (3) (4) (5)

22. I am willing to talk to my female relatives, like my daughter or sister, about using a condom.
(1) (2) (3) (4) (5)

23. I am able to make a difference in my community.
(1) (2) (3) (4) (5)

24. I am willing to work with others in my community to help reduce the spread of HIV/AIDS.
(1) (2) (3) (4) (5)

25. Community places (such as churches, health clinics, local governments) should work together to help reduce the spread of HIV/AIDS.
(1) (2) (3) (4) (5)

26. I am willing to talk to people in power (such as pastors, mayor, health professionals) about ways to help reduce the spread of HIV/AIDS in my community.
(1) (2) (3) (4) (5)

27. I am willing to talk to my close friends and family about ways to help reduce the spread of HIV/AIDS in my community.
(1) (2) (3) (4) (5)

28. People in my community should speak up about HIV/AIDS.
(1) (2) (3) (4) (5)

29. I would like more information about HIV/AIDS so that I can learn how to protect my community.
(1) (2) (3) (4) (5)

30. I would like more information about HIV/AIDS so that I can learn how to protect myself.
(1) (2) (3) (4) (5)

Now, after reading each statement, please circle your best answer.

31. Does anyone you know, like your friends and family, have HIV/AIDS?
(1) Yes (2) No

32. HIV and AIDS are the same thing.
(1) True (2) False

33. HIV is contracted from a toilet seat.
(1) True (2) False

34. It is possible to get HIV when a person gets a tattoo.
(1) True (2) False

35. A person can get HIV by sitting in a hot tub or a swimming pool with a person with HIV.
(1) True (2) False

36. A person can get HIV through contact with saliva, teats, sweat or urine.
(1) True (2) False

37. A person can get HIV even if he or she has sex with another person only one time.
(1) True (2) False

Please answer the following questions using the 5-point scale below each question.

38. How knowledgeable would you say you are about health and medicine?
Not at all knowledgeable (1) (2) (3) (4) (5) Extremely knowledgeable

39. How interested are you in getting information about health and medicine?
Not at all interested (1) (2) (3) (4) (5) Extremely interested

People have many different feelings when they think about people who have HIV/AIDS. Please tell us how you personally feel.

40. How about feeling angry at them? Would you say you feel:
(1) Very angry
(2) Somewhat
(3) A little
(4) Not at all angry

41. How about feeling afraid of them?
(1) Very afraid
(2) Somewhat
(3) A little
(4) Not at all afraid

42. How about feeling disgusted by them?
    (1) Very disgusted
    (2) Somewhat
    (3) A little
    (4) Not at all disgusted

Now, after reading each statement, please tell us how much you agree or disagree on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

43. People with HIV/AIDS should be legally separated from others to protect the public health.
    (1) (2) (3) (4) (5)

44. The names of people with HIV/AIDS should be made public so that others can avoid them.
    (1) (2) (3) (4) (5)

45. People who got HIV/AIDS through sex or drug use have gotten what they deserve.
    (1) (2) (3) (4) (5)

46. How often do you usually attend religious services?
    (1) Nearly every day (4 or more times a week)
    (2) At least once a week (1 to 3 times)
    (3) A few times a month (1 to 3 times)
    (4) A few times a year
    (5) Less than once a year
    (6) Never

47. Besides regular service, how often do you take part in other activities at your place of worship?
    (1) Nearly every day (4 or more times a week)
    (2) At least once a week (1 to 3 times)
    (3)A few times a month (1 to 3 times)
    (4) A few times a year
    (5) Less than once a year
    (6) Never

48. How religious would you say are you on a scale of 1 (Not religious at all) to 5 (Very religious)?
    (1) (2) (3) (4) (5)

49. What is your age? _____

50. What is your marital status?
    (1) Married
    (2) Separated

(3) Widowed
(4) Divorced
(5) Never married

51. What is the last grade of school that you completed?
(1) Grade School or less
(2) Some high school
(3) Completed high school
(4) Some college
(5) Completed college
(6) Graduate School or more

52. What is your occupation? _____

53. What was your total household income last year? Was it:
(1) Less than $10,000
(2) $10,000 to $20,000
(3) $20,001 to $35,000
(4) $35,001 to $50,000
(5) $50,001 to $75,000
(6) $75,001 to $100,000
(7) $100,001 or more

Now, after reading each statement, please tell us how much you agree or disagree on a scale of <u>1 (Strongly disagree)</u> to <u>5 (Strongly agree).</u>

54. I have spent time trying to find out more about my ethnic group (its history, traditions, and customs).
(1) (2) (3) (4) (5)

55. I am active in organizations or social groups that include mostly members of my own ethnic group.
(1) (2) (3) (4) (5)

56. I feel a strong attachment towards my own ethnic group.
(1) (2) (3) (4) (5)

Please answer the following questions to tell us how much you liked the brochure.

57. Overall, what is your impression of this brochure?
Disliked it very much (1) (2) (3) (4) (5) (6) (7) Liked it very much

58. To what degree did you feel positive about this brochure?
Not at all positive (1) (2) (3) (4) (5) (6) (7) Very positive

59. Overall, how well did you like this brochure?

Did not like it at all (1) (2) (3) (4) (5) (6) (7) Liked it very much

60. Overall, do you think the information in the brochure you viewed was:
Untrustworthy (1) (2) (3) (4) (5) (6) (7) Trustworthy

61. Do you think the information in the brochure was:
Unreliable (1) (2) (3) (4) (5) (6) (7) Reliable

62. In the brochure you just viewed, the race of the model(s) was:
(1) White
(2) African American
(4) I don't remember

63. In the brochure you just viewed, the images were:
(1) Of a group of women
(2) Of an individual
(3) I don't remember

64. In the brochure you just viewed, the theme was:
(1) HIV/AIDS: Are **We** At Risk?
(2) HIV/AIDS: Are **You** At risk?
(3) I don't remember

THANK YOU for your participation. If you have any questions, please contact Sarah Nightingale at the A.Q. miller School of Journalism and Mass Communications, 105 Kedzie Hall, Manhattan KS 66506-1501; Email: sarahjn@ksu.edu; Phone 785-532-3965.

#4

Appendix C - Questionnaire (Those Who Did Not View Brochure)

Dear Participant,
We are conducting this questionnaire to gain information about your knowledge and opinion of HIV/AIDS. Your honest answers are important in helping us to create better health education materials. You participation is voluntary, anonymous and your answers will be kept confidential.

1. In one or two sentences, please write down whether **you think** you are at risk for HIV/AIDS and explain why or why not._____
____
_____
_____
_____

2. In one or two sentences, please write down how much **you worry** that you might be at risk for HIV/AIDS._____
_____
_____
_____

3. In one or two sentences, please write down how much you **worry** that members of **your community** might be at risk for HIV/AIDS._____
_____
_____
_____

4. In one or two sentences, please describe what you think you could do to **help stop** the spread of HIV/AIDS in **your community**.
_____
_____
_____
_____

Next, after reading each statement, please tell us how you feel on a scale of 1 (Not at all sure) to 5 (Very sure).

5. I feel that I am at risk for getting HIV/AIDS at this time in my life.
   (1) (2) (3) (4) (5)

6. I sometimes think that I have been exposed to HIV/AIDS.
   (1) (2) (3) (4) (5)

7. I have had sex with someone who could have given me HIV/AIDS.
(1) (2) (3) (4) (5)

8. One of my close friends does things that could lead to them getting HIV/AIDS.
(1) (2) (3) (4) (5)

9. If you were to make a guess, how sure are you that you are at risk of getting HIV/AIDS at this time in your life?
(1) (2) (3) (4) (5)

Now, let's think about the chances of getting HIV/AIDS.

10. What are the chances that **you** will develop HIV/AIDS at some point in your life? Estimate the percentage out of 100. _____/100.

11. What are the chances that the average **American adult woman** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

12. What are the chances that the average **American adult man** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100. _____/100.

13. What are the chances that the average **African American adult woman** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

14. What are the chances that the average **African American adult man** will develop HIV/AIDS at some point in their lives? Estimate the percentage out of 100.
_____/100.

Next, after reading each statement, please tell us how much you agree or disagree on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

15. Condoms are easy to use.
(1) (2) (3) (4) (5)

16. Using condoms when having sex tells my partner I care about my health.
(1) (2) (3) (4) (5)

17. I am able to buy condoms.
(1) (2) (3) (4) (5)

18. I am able to make sure a condom is used with a sex partner.
(1) (2) (3) (4) (5)

19. I feel uncomfortable carrying condoms with me.
(1) (2) (3) (4) (5)

20. It is ok for a woman to carry condoms.
(1) (2) (3) (4) (5)

21. I am willing to talk to my female relatives, like my daughter or sister, about HIV/AIDS.
(1) (2) (3) (4) (5)

22. I am willing to talk to my female relatives, like my daughter or sister, about using a condom.
(1) (2) (3) (4) (5)

23. I am able to make a difference in my community.
(1) (2) (3) (4) (5)

24. I am willing to work with others in my community to help reduce the spread of HIV/AIDS.
(1) (2) (3) (4) (5)

25. Community places (such as churches, health clinics, local governments) should work together to help reduce the spread of HIV/AIDS.
(1) (2) (3) (4) (5)

26. I am willing to talk to people in power (such as pastors, mayor, health professionals) about ways to help reduce the spread of HIV/AIDS in my community.
(1) (2) (3) (4) (5)

27. I am willing to talk to my close friends and family about ways to help reduce the spread of HIV/AIDS in my community.
(1) (2) (3) (4) (5)

28. People in my community should speak up about HIV/AIDS.
(1) (2) (3) (4) (5)

29. I would like more information about HIV/AIDS so that I can learn how to protect my community.
(1) (2) (3) (4) (5)

30. I would like more information about HIV/AIDS so that I can learn how to protect myself.
(1) (2) (3) (4) (5)

Now, after reading each statement, please circle your best answer.

31. Does anyone you know, like your friends and family, have HIV/AIDS?
(1) Yes (2) No

32. HIV and AIDS are the same thing.
(1) True (2) False

33. HIV is contracted from a toilet seat.
(1) True (2) False

34. It is possible to get HIV when a person gets a tattoo.
(1) True (2) False

35. A person can get HIV by sitting in a hot tub or a swimming pool with a person with HIV.
(1) True (2) False

36. A person can get HIV through contact with saliva, teats, sweat or urine.
(1) True (2) False

37. A person can get HIV even if he or she has sex with another person only one time.
(1) True (2) False

Please answer the following questions using the 5-point scale below each question.

39. How knowledgeable would you say you are about health and medicine?
Not at all knowledgeable (1) (2) (3) (4) (5) Extremely knowledgeable

39. How interested are you in getting information about health and medicine?
Not at all interested (1) (2) (3) (4) (5) Extremely interested

People have many different feelings when they think about people who have HIV/AIDS. Please tell us how you personally feel.

40. How about feeling angry at them? Would you say you feel:
(1) Very angry
(2) Somewhat
(3) A little
(4) Not at all angry

41. How about feeling afraid of them?
(1) Very afraid
(2) Somewhat
(3) A little
(4) Not at all afraid

42. How about feeling disgusted by them?
(1) Very disgusted
(2) Somewhat
(3) A little
(4) Not at all disgusted

Now, after reading each statement, please tell us how much you agree or disagree on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

43. People with HIV/AIDS should be legally separated from others to protect the public health.
(1) (2) (3) (4) (5)

44. The names of people with HIV/AIDS should be made public so that others can avoid them.
(1) (2) (3) (4) (5)

45. People who got HIV/AIDS through sex or drug use have gotten what they deserve.
(1) (2) (3) (4) (5)

46. How often do you usually attend religious services?
(1) Nearly every day (4 or more times a week)
(2) At least once a week (1 to 3 times)
(3) A few times a month (1 to 3 times)
(4) A few times a year
(5) Less than once a year
(6) Never

47. Besides regular service, how often do you take part in other activities at your place of worship?
(1) Nearly every day (4 or more times a week)
(2) At least once a week (1 to 3 times)
(3)A few times a month (1 to 3 times)
(4) A few times a year
(5) Less than once a year
(6) Never

48. How religious would you say are you on a scale of 1 (Not religious at all) to 5 (Very religious)?
(1) (2) (3) (4) (5)

49. What is your age? _____

50. What is your marital status?
(6) Married

(7) Separated
(8) Widowed
(9) Divorced
(10) Never married

51. What is the last grade of school that you completed?
(7) Grade School or less
(8) Some high school
(9) Completed high school
(10) Some college
(11) Completed college
(12) Graduate School or more

52. What is your occupation? _____

53. What was your total household income last year? Was it:
(8) Less than $10,000
(9) $10,000 to $20,000
(10) $20,001 to $35,000
(11) $35,001 to $50,000
(12) $50,001 to $75,000
(13) $75,001 to $100,000
(14) $100,001 or more

Now, after reading each statement, please tell us how much you agree or disagree on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

54. I have spent time trying to find out more about my ethnic group, (its history, traditions, and customs).
(1) (2) (3) (4) (5)

55. I am active in organizations or social groups that include mostly members of my own ethnic group.
(1) (2) (3) (4) (5)

56. I feel a strong attachment towards my own ethnic group.
(1) (2) (3) (4) (5)

THANK YOU for your participation. If you have any questions, please contact Sarah Nightingale at the A.Q. miller School of Journalism and Mass Communications, 105 Kedzie Hall, Manhattan KS 66506-1501; Email: sarahjn@ksu.edu; Phone 785-532-3965.

Appendix D - Responses To Open-Ended Questions

Responses to Open-ended question: Do you think you are at risk for HIV/AIDS?	**Abstinent or not sexually active?**
I do not believe that I am risk for HIV/AIDS. I have had a test recently.	
I do not believe I am currently at risk for HIV/AIDS because I am not sexually active, do not need a transplant, have not given blood, etc.	Yes
We are never 100% safe. I use protection during sex, and have selective partners. I have had an HIV once a year or every two years since 1990. I also give blood to the Red Cross and I am tested.	
I think any active woman is at risk..whether it is with one partner or multiple.	
I do not think I am at risk. I have been married for 24 years and have a monogomous relationship.	
According to the brochure I'm not at risk because I'm not sexually active. I believe in abstinence until marriage.	Yes
I'm not at risk for HIV/AIDS because I am single and choose to be celibate. I also do not engage in recreational drug use, and should I need blood, hopefully blood banks screen well.	Yes
I do not think I am at risk because I am married and have been to the same man for 21 years. We are both well educated about AIDS and how it's contracted.	
Yes, in a new relationship.	
No I do not think I am at risk. I use protection and have only been with one person.	
I do not believe that I am at risk for HIV/AIDS since I do not engage in unprotected sex and multiple partners.	
I feel like I'm not at risk at this time.	

I think anyone could be at risk if they are not aware of or in contact through fluids with individuals who have been exposed to HIV/AIDS or they are exposed through a medical procedure.	
No because my husband and I are Christians and faithful to one another.	
Yes, because AIDS doesn't have a name and if you have unprotected sex once sex once you are at risk	
I think that anytime across 10 years the germ could be growing within my body. so I'm not clear, even though 72 years are here at present	
no - not sexually active	Yes
I am not at risk for HIV AIDS	
Well, I say no because I have one partner	
No - not active	Yes
No, not sexually active	Yes
Yes, never been tested	
No	
No I am not at risk, I have yearly check ups and have remained with the same partner for multiple years	
I will remain abstinent	Yes
Yes I think I'm at risk, I believe everyone is at risk whether sexually active or not	
No I am careful with hand-washing and no longer sexual	Yes
There is a chance I can get it by having sex w/ someone who is affected and don't even know he/she is affected	
No, not sexually active	Yes
I am not sexually active	Yes

At present I do not think I am at risk because I practice safe sex	
No at this point in my life I do not think I am at risk. I am happily married and both my husband and I are committed Christians. Unless through medical procedures I don't feel at risk.	
I do not think I'm at risk. I am in a monogomous relationship. Both being tested.	
I do not think I am at risk for HIV/AIDS because I am in a monogomous relationship and use protection and do not use any type of needles.	
Probably not because I use protection.	
No because I choose my partners carefully and know their sexual history.	
I don't think I'm at risk because I always have protected risk and I'm monogomous in my relationships.	
Yes, I think I could be at risk because I am sexually active, but I don't because I use protection.	
No, I have only one partner.	
I think I couldn't be possibly at risk for HIV/AIDS because I'm very safe and the partners I've been with have been tested.	
No, I don't do needle sharing and don't have unprotected sex.	
I do not believe so because I have not had sex yet to catch it from someone.	Yes
I'm currently at very low risk because I'm not sexually active.	Yes
No because I don't participate in unhealthy sexual practices.	
If I don't protect myself during intercourse I could be at risk.	

No I don't think I am at risk because I am a virgin and haven't had any blood work done.	Yes
No I don't believe that I'm at risk.	
Seeing that I have been sexually active, I think I am risk for HIV/AIDS.	
I'm not because I get checked every year, plus I am married with one man, at which my husband does not sleep around with other women.	
No, I have a boyfriend of four years and we are in a monogomous relationship. We get tested often.	
I don't think that I'm at risk because I don't have unprotected sex. In fact, I don't have sex at all.	Yes
I'm not at risk from unprotected sex. I'm not having sex. I am abstinent.	Yes
No I am married and have not had any issues with trust.	
No because I only have one partner at the moment and we get tested. I am not. I practice safe sex/abstinence.	Yes
No I'm not promiscuous and use protection.	
No, I am abstinent.	Yes